

**BEHIND THE POINT OF SALE: A CASE STUDY OF CHICAGO'S
MENTHOL CIGARETTE SALES BAN FROM THE PERSPECTIVE
OF THE RETAIL STORE**

by
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ABSTRACT

BACKGROUND

Menthol cigarette use in the United States has remained stable or increased across demographic groups. Menthol cigarettes are associated with greater likelihood of initiation and decreased likelihood of cessation. In 2009, the Family Smoking Prevention and Tobacco Control Act banned the sale of cigarettes with a characterizing flavor but excluded menthol. Without national regulation, local retail policies have become a pathway to regulate access and reduce associated health disparities. Chicago, IL was the first major American city to ban the sale of menthol cigarettes as part of its partial ban on flavored tobacco sales in stores within 500 feet of high schools. This dissertation explored compliance with Chicago's ban on menthol cigarette sales and explored the implementation experience from the point of view of retailers, including how this key group of implementation actors navigated the implementation process and framed the purpose and intended effect of Chicago's partial ban.

METHODS

This dissertation used a multi-method approach. First, a quantitative study was conducted to assess compliance with Chicago's ban on menthol cigarette sales within a sample of 100 of 154 stores within 500 feet of a high school. Compliance was determined by whether a menthol cigarette pack was purchased and multivariable logistic regression modeled compliance by store type, school, and neighborhood-level factors. Next, semi-structured interviews were conducted with retailers in 31 stores not included in the compliance assessment. An inductive approach to disassembling and reassembling the

data was used to develop the codebook and code data. Coded transcripts were compared to identify patterns and major themes.

RESULTS:

Overall, the rate of compliance with Chicago's partial menthol cigarette sales ban was 57% (weighted, n=53). Gas stations had 81% lower odds (OR=0.19, 95%CI:0.06-0.58) of complying with the menthol cigarette ban compared to larger/chain stores (e.g. liquor stores, grocery stores). Interviews found that retailers in smaller convenience stores and gas stations were concerned over perceived profit losses and the loss of their "one stop shop" appeal. Stores managed these concerns by changing products offered, appealing whether the ban affected their store, or not complying with the ban on menthol cigarette sales. Generally, retailers saw the government as their main source of information about the ban and the threat of a fine was a motivating factor to comply. However, many felt that enforcement visits were invasive and a mechanism to make money for the city. Many also felt that the government's communication about the ban and existing guidelines on what was considered a flavored tobacco product was one-sided and ambiguous, sometime leading to non-compliance. Finally, retailers largely framed Chicago's partial ban as an effort to protect kids but felt it was redundant with the existing minimum age of sale rule. Many challenged whether the 500 foot buffer zone changed access to menthol cigarettes and suggested that there were more equitable approaches to prevent access, such as a comprehensive, city-wide ban.

DISCUSSION:

Results from the compliance assessment and interview studies suggest that a partial ban on menthol cigarette sales is a less preferred policy option for local jurisdiction. The

compliance rate with a partial menthol cigarette sales ban was poor and interviews with retailers suggest that a partial ban may disproportionately impact the financial viability of affected retail stores while making limited gains in reducing access to menthol cigarettes, which were still widely available in affected stores and unaffected stores beyond 500 feet of high schools. Findings from this study suggest that local policymakers should actively engage retailers in the design and implementation of menthol cigarette bans and other tobacco control regulatory efforts. This active partnership can incorporate the unique perspective of retailers as implementation actors into the design of ordinances, capitalize on their potential support for comprehensive efforts, and enhance compliance by addressing retailers' implementation needs.

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CHAPTER 1: INTRODUCTION

In her editorial “It’s the 21st Century: isn’t it past time to ban menthol cigarettes?” tobacco control advocate and researcher Ruth Malone contends that the public health community should no longer tolerate the sale of menthol cigarettes in the United States. In making her case, Malone highlights three major points to summarize the current political climate for a national menthol cigarette ban.¹ First, Malone argues that the scientific evidence supports that policymakers should ban menthol cigarettes, as they are associated with smoking initiation and greater addiction or difficulty quitting smoking.¹⁻³ Second, she challenges the U.S. Food and Drug Administration (FDA), which has reviewed this evidence, yet failed to use its authority to ban menthol cigarettes sales nationwide.¹ Third, Malone observes that local jurisdictions are not waiting for the FDA and many have passed or implemented local menthol cigarette bans.¹

It is to the third point that the contribution of this dissertation applies. In February 2017, the City of Chicago became the first major city in the United States to include a ban on menthol cigarette sales within a larger ban on flavored tobacco sales in retail stores within 500 feet of high schools.⁴ Given federal inaction on a national menthol cigarette ban and the growth of local efforts to take action, conducting a case study to explore the implementation of Chicago’s partial ban from the point of view of the retail store can provide evidence to other jurisdictions in the process of developing or implementing similar initiatives. Although there is research evaluating compliance with the national flavored cigarette sale bans (excluding menthol) and comprehensive or province-wide menthol cigarette bans in Canada,^{5,6} no research to date has explored compliance with a local menthol cigarette ban in the US. Further, there is emerging

interest in studies that explore retailers' experience implementing tobacco control regulatory efforts and how the manner in which these initiatives are framed and designed by policymakers influence retailers' attitudes toward such efforts.⁷⁻¹² This dissertation contributes to the literature by focusing on the implementation of Chicago's partial ban on the sale of menthol cigarettes and other flavored tobacco products and uses quantitative and qualitative methods to explore the following aims:

Aim 1: Assess store compliance with restrictions on the sale of menthol cigarettes among a sample of affected stores within 500 feet of high schools, including how compliance varies based on store type and neighborhood location.

Aim 2: Explore how retailers respond to and navigate ban implementation across dimensions of enforcement agency pressure, clarity in policy guidelines, and competing priorities – such as profit loss and pressure from other actors.

Aim 3: Explore how retailers conceptualize the purpose and intended effect of the partial ban in relation to the youth frame embedded in the design of Chicago's ordinance to protect youth from tobacco access.

OVERVIEW OF DISSERTATION CHAPTERS

This dissertation is divided into six additional chapters. Chapter 2 provides an overview of the relevant literature related to menthol cigarette use in the United States and reviews the literature on the implementation of tobacco control regulatory efforts in stores. Chapter 2 also identifies the gaps in the literature that this dissertation addresses and provides the conceptual orientation and framework guiding this research. Chapter 3 describes the research site of Chicago and the quantitative and qualitative methods used in this dissertation. Chapter 4 examines the results of the quantitative in-store audits to

assess compliance with Chicago's ban on menthol cigarettes in retail stores (Aim 1). Chapter 5 utilizes findings from interviews with retailer interviews to explore the complex environment within which retailers experience ban implementation, which often involves managing perceived profit loss, experiencing government agency enforcement visits as invasive, and navigating ambiguity in determining what is a flavored tobacco product or menthol cigarette (Aim 2). Chapter 6 also uses interview data to examine how retailers frame Chicago's youth-centered ban on flavored tobacco and menthol cigarettes sales in stores within 500 feet of high schools as a redundant and unfair regulation that ignores the existing minimum age of sale rule (Aim 3). This study also explores how affected retailers conceptualize more equitable alternatives to address access to flavored tobacco and menthol cigarettes. Chapter 7 discusses the findings across studies, offers suggestions for local policymakers designing tobacco control regulatory efforts to be implemented within retail stores, and highlights areas for future research.

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CHAPTER 2: LITERATURE REVIEW AND NEXT STEPS

Since the landmark Surgeon General report on the health consequences of smoking in 1964, there has been a significant decline in smoking from 43% in 1964 to 15.5% in 2016.^{1,2} Yet, approximately 480,000 preventable deaths occur each year due to smoking and secondhand smoke exposure.² Further, the burden of smoking is not equally shared across populations in the United States.³ Smoking prevalence substantially varies by demographic characteristics of smokers, including race, sexual identity, education status, and level of income.^{1,3} Smoking prevalence also varies across product characteristics, including whether cigarettes are menthol or non-menthol flavored.

DISPARITIES IN MENTHOL CIGARETTE USE IN THE US

According to a recent analysis of National Survey on Drug Use and Health data, the overall prevalence of menthol cigarette use increased from 34.7% in 2008-2010 to 38.8% in 2012-2014, while prevalence of non-menthol cigarette use declined.⁴ During this time, menthol cigarette use significantly increased among adults 18 to 49 years old and among White, Asian, and Latino smokers, and use remained stably high among youth 12-17 years old (52.5% vs. 53.9%) and African American smokers (86% vs. 84.6%).⁴ Analysis of federal tobacco tax sales data and private market share reports suggests that 89% of the total decline in cigarette consumption from 2000 to 2011 could be attributed to a decrease in the sale of non-menthol cigarettes.⁵

Menthol cigarettes have been on the market place since 1925.⁶ As an additive, menthol makes cigarettes more palatable to new and established smokers by producing variety of sensory effects, which include a cooling or soothing feeling and minty flavor and aroma.⁷ In recent years, the market share of menthol cigarettes across

the United States has significantly and steadily grown.⁸ They now represent 35% of the domestic cigarette sales, a marked increase from 25% during the 1970s.⁹ The growth of the menthol cigarette market has been celebrated in tobacco industry earning reports,¹⁰ and the 2015 merger between two major tobacco companies, Lorillard and Reynolds America, has resulted in accelerated efforts to increase sales of the popular Newport menthol cigarette brand across the country.¹¹

The increase in menthol cigarette sales and use is of particular concern to public health because menthol cigarettes have been associated with increased likelihood of smoking initiation and decreased likelihood of cessation.¹² Youth who initiate smoking with menthol cigarettes are more likely to become established smokers.^{13,14} Importantly, while menthol smokers are more likely to make a quit attempt compared to non-menthol smokers,¹⁵ they are less successful at quitting.¹⁵⁻²⁰ In fact, young adults, African American, and Latino menthol smokers are less likely to quit compared to non-menthol smokers in the same racial group,^{15-17,21} and several studies demonstrate that African American and Latino menthol smokers have lower odds of quitting compared to White menthol smokers.^{17,19,21} Finally, menthol smokers, particularly African American menthol smokers are less likely to switch from menthol to non-menthol cigarettes suggesting that non-menthol cigarettes are not an acceptable substitute for menthol cigarettes and access to this product contributes to continued burden of use.²²⁻²⁵

The disparate patterns in menthol cigarette use are important to consider because they reflect the historic marketing of menthol cigarettes by the tobacco industry, which deliberately targeted women, African Americans, Latinos, and youth.^{6,26-29} To this day menthol cigarettes are more likely to be advertised and sold in low-income African

American and Latino communities across the United States,³⁰⁻³² as well as neighborhoods with a larger proportion of youth residents.³¹⁻³³ Further, brand recognition of Newport menthol cigarettes is significantly higher among African American youth and is generally associated with significantly greater odds of youth initiation across racial groups.³⁴ Although 53% of all menthol cigarette smokers in the United States are White,³⁵ African American and Latino smokers have 15.3 and 2.2 greater odds of smoking menthol cigarettes compared to White smokers, respectively.⁴ Additionally, adults 26 years and older represent 71% of all menthol smokers compared to 6% of youth,³⁵ yet, youth smokers are significantly more likely to smoke menthol cigarettes compared to adults.⁴

FEDERAL INACTION TO REGULATE MENTHOL

Given the deleterious health effects of smoking in general and menthol cigarettes in particular, as well as the continued disparities in menthol cigarette use, regulation of menthol cigarette sales has become a focus of federal policy debate and tobacco control efforts. In 2009, the U.S. Food and Drug Administration (FDA) officially assumed authority to regulate tobacco products through the 2009 Family Smoking Prevention and Tobacco Control Act (FSPTCA).^{36,37} One major restriction mandated by the FSPTCA was a ban on the sale of all cigarettes with a characterizing flavor, such as candy, fruit or spice.³⁷ However, this ban did not include menthol. In the final legislation, menthol flavoring, alongside tobacco flavor, were the only two natural or artificial cigarette flavors not included in the flavored cigarette ban (Section 907.A.1.a of the FSPTCA).³⁷ The decision to exclude menthol as a characterizing flavor was and continues to be a source of debate among public health, tobacco industry, and African American interest group stakeholders.³⁸⁻⁴¹ An analysis by the Congressional Research Service suggests that

the exemption of menthol from the characterizing flavor ban was a political compromise with Phillip Morris to ensure that the corporation would support the legislation.³⁹ Public health organizations, such as the African American Tobacco Prevention Network viewed the menthol flavor exemption as a discriminatory measure against African Americans.^{38,41}

Although the FSPTCA did not include menthol as a characterizing flavor, it does reserve the authority of the FDA to issue a future product standard on menthol.³⁷ To build the evidence for such a measure, the FSPTCA mandated that the FDA's Tobacco Products Scientific Advisory Committee (TPSAC) – a committee established through the legislation to provide scientific guidance on tobacco control issues – conduct a study on the “impact of the use of menthol in cigarettes on the public health, including such use among children, African Americans, Hispanics, and other racial and ethnic minorities” (Section 907.E.1 of the FSPTCA).³⁷ The TPSAC evaluated a wide range of evidence on the individual and population level health effects of menthol cigarettes and submitted their report to the FDA in March 2011. It concluded with the recommendation that the “removal of menthol cigarettes from the marketplace would benefit public health in the United States.”²⁰ A separate and independent report conducted internally by the FDA was published in July 2013 and drew a similar conclusion to the TPSAC report.^{20,42} Although both of these reports are currently available for use and suggest that a national menthol cigarette ban would benefit public health, the FDA largely remained silent on the issue of a national menthol cigarette ban.

In 2016, the FDA took the strongest position on the public health impact of menthol flavor when it extended its definition of “tobacco products.”^{43,44} The FDA

proposed to eliminate or severely restrict marketing of newly deemed tobacco products, including electronic cigarettes, with a characterizing flavor including menthol unless the manufacturer could provide evidence of the public health benefit of such products.⁴⁵ However, the Office of Management and Budget – who reviewed the deeming given the potential national economic impact of the regulations – removed this statement and supporting evidence in the final rule.⁴⁵ Recently, there has been renewed interest in national regulation of menthol cigarettes. In March 2018, the FDA issued an advanced notice of proposed rulemaking (ANPRM) regarding the role of flavors in tobacco use.^{a,46} Over a period of three months, the ANPRM solicited public comments, research results and other information on the role of flavors, including menthol, in attracting youth to tobacco use and helping adults to reduce cigarette use and/or switch to alternative products.⁴⁶

Collectively, these recent rulemaking activities combined with the reports on the public health impact of menthol cigarettes suggest that the FDA relies on scientific evidence to support its decision-making regarding menthol flavoring and menthol cigarettes. However, over time competition between this evidence and larger political and economic interests has resulted in prolonged inaction on a decision to ban menthol cigarettes and other menthol flavored products.^{39,43,44} In the absence of national regulation, local retail policies have become a pathway to regulate access to flavored tobacco, including menthol cigarettes.^{40,47}

^a For more information, the docket number for this ANPRM is Docket No. FDA-2017-N-6565.

CHICAGO'S PARTIAL BAN INCLUDES MENTHOL CIGARETTES

There are several provisions within the FSPTCA that preserve the right of local jurisdictions to adopt “measure relating to or prohibiting the sale” of tobacco products.^{37,40} In July 2016, the City of Chicago became the first major US city to implement a ban on the sale of menthol cigarettes as part of its ban on all flavored tobacco products in stores^{b,c} within 500 feet – or roughly two city blocks – of schools.^{48,49} Initially, this ban extended to all stores within 500 feet of elementary, middle, and high schools. Due to pressure by a retail group association, the City Council voted to relax the ban in December 2016 and it currently affects only those stores located within 500 feet of high schools.⁵⁰ The partial ban affects 154 retailers, or roughly 6% of licensed tobacco retailers in Chicago.⁵¹

The development of the ordinance was strongly backed by Chicago Mayor Rahm Emanuel and was promoted as a direct response to federal inaction to regulate a ban on menthol cigarettes following the release of the 2013 FDA report.^{52,53} Specifically, Mayor Emanuel directed the Chicago Board of Health (CBOH) to engage community members and content experts to identify “‘winnable’ policy solutions” that would reduce flavored tobacco product use “among the most vulnerable: our children.”⁵⁴ During September 2013, the CBOH held four town hall meetings regarding menthol cigarette use and considered expert evidence and testimony from residents in non-White and LGBT neighborhoods disproportionately impacted by menthol cigarette sales and advertising to

^b In addition to menthol cigarettes, Chicago’s ban also includes restrictions on flavored e-cigarettes and liquid nicotine, as well as flavored cigars, shisha, and smokeless tobacco products.^{49,59}

^c Chicago’s ban excludes “retail tobacco stores” or stores that make more than 80% of their gross revenue from the sale of tobacco, other smoking devices, and related accessories. In this chapter and the remaining chapters, a reference to retail stores affected by Chicago’s ban excludes this category of tobacco vendors.

inform ordinance development.⁵² In December 2013, the City Council passed the ordinance to ban the sale of all flavored tobacco products, including menthol cigarettes, in retail stores located within 500 feet of schools.⁵³ The final policy resolution described the partial ban as the “least-burdensome effective tactic to combat the serious problem of youth tobacco use.”⁵⁵

The ordinance was effective July 2014, however, it was not implemented until July 2016.^{53,56} Implementation was delayed for two major reasons.^{53,56} First, the ordinance faced legal challenge by a retail group association, which was dismissed by a U.S District Judge in June 2015.^{57,58} Second, the City revised and strengthened the rules for what constituted a flavored tobacco product in late 2015 and developed an online database to assist retailers in identifying flavored tobacco products.^{56,59} Chicago’s Department of Business Affairs and Consumer Protection (BACP) is the agency that currently enforces the ordinance.^{49,60,61} All stores affected by the ban were sent a letter from BACP, which communicated that the store had 90 days to deplete their stock of menthol cigarettes and other flavored tobacco products.⁶⁰ The letter also provided information on how a storeowner could appeal whether their location was within 500 feet of the identified school.⁶⁰ Additionally, the letter also shared the link to the flavored tobacco database.⁶⁰ Stores who violate the ban are subject to a monetary fine ranging from \$500 to \$2,000, and known or repeated offenses may result in revocation of the tobacco retailer license.⁶⁰

Recently, other localities have taken similar action to ban menthol cigarettes and other flavored tobacco products through partial and comprehensive efforts. In January 2017, the city of Berkeley, California enacted a flavored tobacco ban in

stores within 600 feet of schools, which also included menthol cigarettes.⁶² Minneapolis, MN, St. Paul, Minnesota and Oakland, California also passed comprehensive bans that restrict menthol cigarette sales to specialty, adult-only tobacco stores, effective during the summer of 2018.⁶³⁻⁶⁵ Finally, in 2017 the San Francisco Board of Supervisors passed the strongest measure against flavored tobacco sales to date – a city-wide flavored tobacco ban that also included e-cigarettes and menthol cigarettes.⁶⁶ However, an R.J. Reynolds-supported campaign successfully petitioned for a public vote on the measure in June 2018, reflecting opposition by the tobacco industry.⁶⁶ The public voted in favor of the ban (68% versus 32%) in spite of the substantial tobacco industry investment in a public campaign against the ordinance, reflecting popular support for a tobacco control regulatory initiative that bans all flavored tobacco products and menthol cigarettes in this particular city.⁶⁷

Given the growth of local tobacco control retail policies as structural interventions to regulate the sales of flavored tobacco products like menthol cigarettes,^{48,68} a case study of Chicago's ordinance provides the opportunity to explore 1) the level of store compliance with Chicago's ban on menthol cigarette sales 2) the contextual conditions surrounding how retailers navigate ban implementation and 3) how retailers conceptualize the purpose and intended outcome of the ban.^{69,70} This in-depth approach will first include an assessment of the rate of compliance with the ban on menthol cigarettes specifically, among a sample of affected stores. Next, the case study will explore the process of implementing the ban and how retailers perceive or frame the purposes and intended outcome of the ban in the city. Collectively, this study can be

useful to other jurisdictions interested in developing and implementing a similar retail store policy to reduce the burden of menthol cigarette use by offering unique insights from the point of view of the retail store. More generally, this research contributes to a growing and important line of research related to how retailers comply with and navigate the implementation of structural interventions, which are intended to change the environment in which products like tobacco are sold in their stores.⁶⁸

RESEARCH FOUNDATIONS: COMPLIANCE STUDIES

Compliance studies provide regulators with evidence on the extent to which a specific retail policy is being followed or implemented.^{71,72} Compliance assessments can also be used to identify where to target enforcement and education activities related to a particular policy.^{71,72} Research on store compliance with tobacco display bans suggests that comprehensive bans are more effective and have higher rates of compliance compared to partial bans.^{73,74} Assessment of tobacco display ban and minimum age of purchase policies suggest that smaller, independent convenience stores are less compliant with these policies compared to larger stores.^{74,75} Further, there is reasonable evidence to suggest that both the type of store (e.g. smaller, independently owned convenience store versus larger or chain stores) and the neighborhood in which the store is located present unique factors that may impact retailer compliance.^{72,74-77} Therefore, a compliance assessment of Chicago's partial ban on menthol cigarette sales could provide valuable information to enhance or target current enforcement efforts in the city and other jurisdictions.

Compliance with Other Flavored Tobacco Bans

To date, only a handful of studies have evaluated compliance with flavored tobacco policies, including the national ban on flavored cigarettes and local flavored tobacco bans in New York City and Canada.^{72,77-80} These studies broadly demonstrate that compliance is influenced by product supply, store type and location, and relationships with tobacco companies.^{72,77-80} At the national level, two studies assessed compliance with the 2009 FSPTCA flavored cigarette ban among a sample of stores across the United States⁷² and North Carolina.⁷⁸ Both studies found that five or fewer stores were in violation of the flavored cigarette ban.^{72,78} In a follow-up survey with North Carolina retailers, Rose et al. suggest that retailers were generally unaware of the regulation and the high level of compliance with the flavored cigarette ban may be the result of *unknowing compliance* – that is retailers no longer sold flavored cigarettes because tobacco wholesalers no longer provided these products to stores due to the comprehensive, national policy.⁷⁹ These results reflect the impact of product supply on the ability of stores to sell banned products, regardless of whether or not stores are aware of the policy or actively following it.⁷⁹ It is likely that the rate of compliance would be more variable in a partial ban setting, like Chicago, where the global supply of menthol cigarettes is not disrupted.

Due to the low rate of noncompliance, the authors were unable to model store or neighborhood characteristics associated with violation of the national flavored cigarette sales ban.^{72,78} However, both research teams assessed compliance with other FSPTCA regulations and found that noncompliance with a retail policy (e.g. loose cigarette sales) was patterned by neighborhood characteristics.^{72,78} For example, stores located in neighborhoods with a higher proportion of low income, youth, African American, or

Latino residents were more likely to sell loose cigarettes.⁷² Given that menthol cigarettes are more likely to be sold in low income, African American and Latino neighborhoods,³⁰⁻³² or neighborhoods with a higher proportion of youth,³¹⁻³³ these results suggest that compliance with a menthol cigarette ban may be less likely in these settings.

In New York City, Farley and Johns used tobacco sales data to assess changes in the sale of flavored tobacco products following the enforcement of the city-wide other flavored tobacco product ban^d (excluding menthol cigarettes) in 2010.⁷⁷ Overall, the authors found that the sale of other flavored tobacco products declined by 87% following implementation of the ban.⁷⁷ Further, a review of enforcement data found that only 4% of stores in the city received a citation for violation of the ban.⁷⁷ According to the authors, the combination of these findings indicates that a comprehensive, city-wide ban on flavored tobacco products was a viable tobacco control regulatory effort in retail stores to restrict access to other flavored tobacco products.⁷⁷ However, 86% of stores included in their sample were pharmacy or grocery stores, suggesting that the results of the compliance assessment may not be generalizable to smaller, independent convenience stores.⁷⁷ Tobacco products are more likely to be sold in these stores⁷⁷ and often tobacco sales make up a greater amount of total profit for smaller, independently owned convenience stores.^{81,82} Therefore, it is likely that compliance may be lower in small, independent convenience stores compared to larger stores or chain stores due to factors such as the need to maximize profits and meet customer demand.

Finally, Brown et al. assessed compliance with a menthol cigarette ban in two Canadian provinces.⁸⁰ The authors determined that retailers were compliant with the

^d In this policy, other tobacco products included cigars, cigarillos, little cigars, chew, snuff, snus, tobacco, pipe tobacco, roll-your-own (RYO) tobacco and dissolvable.

comprehensive policy because they were unable to purchase any cigarette packs labeled as menthol in either province after ban implementation.⁸⁰ However, the authors discovered that packs labeled as menthol prior to the ban were rebranded as menthol replacement packs after the ban.⁸⁰ Analysis of marketing materials from a tobacco company revealed that the industry communicated the rebranding to retailers in an effort to assist both retailers and customers in finding a replacement pack.⁸⁰ In New York City, Farley and John also found that tobacco companies responded to the city's flavored tobacco ban by marketing products with ambiguous names such as "Pink," which often contained as many flavor components as tobacco products with explicit flavor names (e.g. "Strawberry").⁸³ Together, these studies suggest that retailers are following the letter of the law. However, tobacco companies may be working with retailers to create the impression that flavored tobacco products are still available, potentially undermining the potential public health benefit of these comprehensive bans.⁸⁰

In sum, the compliance studies reviewed demonstrate that retailers are generally compliant with comprehensive retail policies that restrict flavored tobacco sales. However, more research is needed to understand if compliance is also high in a partial menthol cigarette sales ban setting, the extent to which noncompliance may vary by store type or neighborhood location, and whether tobacco companies and retailers are marketing menthol cigarette replacement packs in a partial ban setting, like Chicago.

RESEARCH FOUNDATIONS: IMPLEMENTATION EXPERIENCE

The results from the studies conducted by Brown et al. and Farley and John provide insight into how tobacco companies modify products in reaction to a ban on menthol cigarette and flavored tobacco sales and communicate these changes.^{80,83} In

addition to communication with tobacco companies,^{74,79,81,84-86} retailers may also experience competing demands from government agencies,^{73,74,87-90} corporate offices,^{87,91} and the desire to maintain profits^{74,79,81,84-86,91-94} – all of which can impact the implementation experience. An investigation of how retailers manage these various interests and expectations in their efforts to implement a retail store policy has largely gone unexplored. To date, there are no qualitative investigations to examine how these factors impact how retailers navigate implementation of a menthol cigarette sales ban, particularly a partial ban where only retailers within 500 feet of high school are affected by such a policy.

Sources of Information about Retail Policies

Tobacco companies and corporate offices – rather than government agencies – are often the most significant sources of information for retailers about tobacco marketing and sales regulations.^{79,81} Rose et al. found that 71% of chain stores received information from their corporate offices, and approximately 70% said that tobacco companies were a common source of information about regulations.⁷⁹ Importantly, the least common source of information about policies was government agencies (24%).⁷⁹ Although government agencies, as well as corporate offices, can facilitate compliance with bans and other regulatory efforts by providing education and training,^{87,91} there was a general lack of knowledge about the exact requirements of most laws or ordinances among retailers, which may be a barrier to implementing a regulation.^{74,90,91} Further, infrequent or absent government enforcement can decrease compliance with and awareness of regulations.^{73,74}

Additionally, interviews with retailers in New Zealand found that tobacco representatives often provided inaccurate information about the impact of policies and

their potential to contribute to profit loss.^{84-86,95} However, it should be noted that retailers do not always agree with tobacco industry claims around the impact of various tobacco sales regulations.^{85,95} Together, this evidence highlights a complex communication network in which retailers operate. Retailers may be exposed to limited or unclear government communication about tobacco retail policies to assist in the implementation process.^{73,74,90,91} Further, they may adapt their marketing behavior in response to a retail policy based on information communicated by the tobacco industry, which can either be inaccurate^{84-86,95} or work to directly undermine the public health benefit of a policy.^{80,83}

Concern about Profits

Profit loss is a substantial barrier to compliance with tobacco retail policies and source of resistance to policy change.^{79,81,82,85,86,92,95} In previous studies, retailers were opposed to policies that selectively restricted the sale of tobacco in certain stores, arguing that they were unfair and restricted the profitability of stores.⁸⁴⁻⁸⁶ Further, storeowners were generally cautious about implementing any retail store policy that would violate existing contracts they had with tobacco companies and remove this source of revenue.⁸² Tobacco contracts, which are usually long-term, paid deals negotiated with a tobacco company based on tobacco sales volumes and display allowances,^{96,97} allow tobacco companies to broadly control which tobacco products are displayed and promoted in retail stores.^{97,98} Convenience stores that rely on tobacco sales, as well as money from contracts or paid deals with tobacco companies to sell and promote specific products, were more likely to be resistant to policy change compared to larger or chain stores.^{79,81,82,84-86,92} In fact, stores that were not heavily reliant on tobacco revenues were more likely to support tobacco retail policies and some grocery stores and pharmacies in

the United States have voluntarily banned tobacco sales.⁹³⁻⁹⁵

Collectively, these studies suggest that retailers are concerned with maximizing profits and the amount of money generated from tobacco sales and contracts may impact how retailers adapt to a new retail policy. Retailers may be more resistant to implementing a partial ban, which can be viewed as limiting their ability to be profitable.^{84,86} This is particularly relevant for smaller convenience stores heavily dependent on tobacco sales versus larger stores (e.g. grocery stores) that are more supportive of restrictions on tobacco sales.^{79,81,82,84-86,92-94}

RESEARCH FOUNDATIONS: ISSUE FRAMING AND OPINION

Finally, the development and implementation of any tobacco control regulatory efforts in stores is informed by how the issue of tobacco use is framed by policymakers and stakeholders.^{99,100} In general, the manner in which an issue is selectively framed defines how policy makers and the public (including retailers) perceive who is affected by tobacco use and shapes what solutions are available to address this issue.^{100,101} For example, framing tobacco use as a problem of youth smoking is a common issue frame employed by both tobacco control advocates and the tobacco industry.^{100,102-104} This frame implies that youth need to be protected from initiating smoking and policies should reduce the extent to which youth are exposed to or can purchase tobacco products.

Some experts argue that youth-oriented framing favors the tobacco industry because it normalizes smoking as an adult only behavior and simultaneously deemphasizes the industry's responsibility for creating a lethal, addictive product.^{100,103} However, policies framed around protecting youth are widely supported by policymakers and the public,^{105,106} and may be more politically feasible policy solutions because they

protect a vulnerable group without infringing upon adult freedom of choice.^{102,107,108} As previously mentioned, Chicago's ban on flavored tobacco and menthol cigarettes sales in stores within 500 feet of schools was framed as a youth-oriented policy and described as the "least-burdensome" and effective approach to address the problem of youth tobacco use in the city.⁵⁵ This statement potentially suggests that the partial, zone-based ban was the most politically favorable, and therefore least-burdensome approach for policymakers. Yet, the opinion of retailers as to whether this is the least-burdensome or effective approach as the ban is implemented in their stores is unknown.

Retailer Perception of Tobacco Control Regulatory Efforts in Stores

Framing provides the foundation for policy development and it can also influence individual retailers' perception of and attitudes toward tobacco sales regulations that they implement in stores.¹⁰⁰ There is a small but growing body of research that has investigated retailers' opinions of proposed or current regulatory efforts that impact tobacco sales at their stores that offers initial insight into this area of study.^{84-86,95,110} Exploring retailer opinions on policy options is particularly relevant because retailers – who are key implementation actors – are often disconnected from stakeholders involved in issue framing and policy development.^{107,109}

Research conducted in New Zealand and the United States found that individual retailers did not monolithically oppose potential government efforts to regulate tobacco sales in stores.^{79,84-86,95} In general, retailers expressed support for policies to restrict youth access to tobacco products.^{79,85,86} Further, in several studies retailers discussed feeling conflicted about selling tobacco products and expressed support for larger public health efforts to reduce tobacco use in their communities.^{79,84-86} However, as previously

mentioned, retailers were also concerned about a competitive and fair marketplace. In several studies, retailers opposed regulations, like a ban on tobacco sales in certain stores, that they felt would victimize certain stores and their ability to be profitable and competitive.⁸⁴⁻⁸⁶ This was particularly pronounced among smaller convenience stores that were more dependent on tobacco sales as a source of profit,⁸⁴⁻⁸⁶ indicating that store type may influence retailers' perceptions of and level of support for sales regulations.

In summary, these data suggest that retailers may be supportive of tobacco control regulatory efforts in their stores, particularly efforts framed as policies to protect youth.^{79,84-86,95} However, there is evidence that retailers do not support efforts that they perceive as unfairly restrictive on the marketplace and their individual ability to run a profitable business.⁸⁴⁻⁸⁶ Further, many of these studies discussed opinions on proposed regulations,^{84-86,95} indicating that there is limited investigation into how retailers frame or discuss the purpose and intended outcome of a tobacco sales regulation, like Chicago's ban, as it is implemented in the store.

NEXT STEPS FOR RESEARCH

Based on the evidence presented above, there are several next steps for research to explore the implementation of Chicago's ban on flavored tobacco and menthol cigarette sales in stores within 500 feet of high schools. Given that structural interventions are a growing public health approach to change the environment in which tobacco products are sold and reduce tobacco use,^{68,111-113} the proposed research is relevant to informing the development and implementation of future regulatory efforts that consider the perspective of retailers as key actors in the implementation process.

Assess compliance with a partial menthol cigarette sales ban and variation by store type and neighborhood location. Evidence suggests that compliance with comprehensive flavored tobacco policies is generally high,^{72,77,78,80} however no study to date has investigated compliance with a partial ban on the sale of menthol cigarettes. Additionally, these studies are limited in their ability to determine how compliance may vary by store type (e.g. smaller, independent convenience stores versus larger or chain stores) and neighborhood location.^{72,77,78} This dissertation will address these gaps to assess compliance with Chicago's restriction on menthol cigarettes sales in stores within 500 feet of high schools among a sample of stores affected by the ban. Additionally, this research will build on Brown et al.'s study to secondarily investigate whether retailers are selling menthol cigarette replacement packs in a partial ban setting.⁸⁰ Although Chicago's ordinance restricts the sale of all flavored tobacco products, the compliance assessment will only focus on whether stores were compliant with the ban on menthol cigarette sales given the burden of menthol cigarette use in the United States and interest in efforts to regulate their sale that were previously discussed.^{14,48}

Qualitatively explore how affected retailers respond to and navigate implementation of the partial ban across dimensions of enforcement agency pressure, clarity in policy guidelines, and competing priorities – such as profit loss and pressure from other actors (e.g. tobacco industry representatives). Studies indicate that communication about tobacco retail policies,^{74,79, 81,84-87,90,91,95} level of enforcement,^{73,74} and concern about profit loss influence how retailers adapt to a new tobacco sales regulation in stores.^{74,79,81,84-86,91-94} Further, this research, along with the compliance assessment studies, offers insight into how these factors may differentially influence

retailer behavior based on store type (e.g. smaller, independent convenience stores versus larger or chain stores) and neighborhood location where menthol cigarettes are more likely to be sold.^{30,31,72,79,81,82,84-86,92-94} Currently, no studies have been conducted to explore how these factors influence ban implementation in the context of a partial ban on menthol cigarettes and other flavored tobacco products. This dissertation will address this gap. Interviews with affected retailers will explore how a) communication and control over the implementation process by government, corporate, and tobacco industry representatives, b) experience with the enforcement of the ban, and c) concerns about profits influence how retailers navigate implementation of Chicago's partial ban, including compliance with the restriction on menthol cigarette sales. These results will build on existing studies and can contribute additional insight into how retailers navigate competing demands and interests and adapt their behavior in response to a new tobacco sales regulation.

Qualitatively explore how retailers conceptualize the purpose and intended effect of Chicago's partial ban in relation to the youth frame embedded in the design of the ordinance. Issue framing is the foundation of tobacco control policy development and can also influence stakeholder opinions and attitudes toward specific policies.^{99,100} For example, youth frames – such as the frame used to define Chicago's partial ban⁵⁵ – are often viewed more favorably among policy makers and the public.^{105,106} Studies investigating retailer opinions on a variety of proposed tobacco control regulatory efforts suggest that retailers favorably view regulations framed to protect youth,^{79,84-86,95,} yet retailers in several studies expressed concern regarding regulations that limit tobacco sales only in certain stores, particularly smaller stores.⁸⁴⁻⁸⁶ However, little is known

regarding how issue frames used to develop and design local ordinances influence retailer response to tobacco control regulatory efforts as they are being implemented in stores. This is particularly relevant for a partial policy like Chicago's ban, where affected retailers may be in favor of addressing youth access to tobacco use but hostile toward an incremental effort that they view as limiting to their ability to run a business.^{79,85,86,107} This dissertation addresses this gap and utilizes qualitative interviews with a sample of retailers affected by Chicago's ban to explore how retailers frame the purpose of the ban and its intended outcome within the context of the ordinance's youth frame. This research can contribute to the growing literature on how issue frames used to develop and design local ordinances influence retailer response to tobacco control regulatory efforts as they are carried out in stores.

CONCEPTUAL APPROACH

In order to address these gaps, this dissertation study heavily drew on concepts discussed in the policy implementation research literature. Conceptually, the goal of policy implementation research is to investigate the extent to which the outcome of the policy is met and the process of converting a policy into action.^{109,114,115} The policy outcome is broadly conceived of as the extent to which the policy related goals have been attained.^{109,115} This dissertation quantitatively investigates one outcome of Chicago's ban – compliance with the restriction against menthol cigarette sales among a sample of affected stores within 500 feet of high schools. As a target group for tobacco control regulations in retail stores, retailers represent the smallest unit of change in the implementation process.¹⁰⁹ Therefore, the outcome or compliance with a policy is highly dependent on retailers and the activity in the retail store.^{109,115}

However, the outcome of a policy cannot be divorced of the context and process of putting the policy into action.^{109,115} According to McLaughlin, implementation actors “effectively negotiate their response [to a regulation], fitting their action to the multiple demands, priorities, and values operating in their environment and the effective authority of the policy itself.”¹⁰⁹ Therefore, the process of policy implementation is influenced by the demands and priorities of the environment in which retailers as implementation actors operate.¹⁰⁹ Further, when communication and clarity in guidelines or strength of policy enforcement are ambiguous or weak, competing priorities (e.g. desire to maintain profits) or pressure from external actors, like the tobacco industry may influence how retailers navigate the implementation process and their decision to comply.^{109,115} Broader social, economic, and political forces can also influence the policy implementation process and may also impact the intended outcome of the policy.¹⁰⁹ In this dissertation, qualitative interviews conducted with retailers provide the opportunity explore the contextual factors that may impact the implementation process.

Finally, policy implementation research suggests that policymakers and stakeholders involved in framing issues and policy development are often different from the set of actors involved in implementing such directives.^{107,109} Issue framing involves selecting some aspects of perceived reality to promote a particular issue definition and solution.^{99,116} Given that frames can vary by different groups of stakeholders who hold different ideologies and assumptions,^{99,116} implementation actors may be in conflict with issues frames based on the “multiple demands, priorities, and values” and larger social, political, and economic forces operating in the implementation environment.^{107,109} This dissertation utilized interviews with affected retailers to explore how the embedded youth

frame of Chicago's ban was conceptualized with respect to the values and priorities of retailers implementing the ban and the broader political and economic context in which retail stores operate.

RESEARCH QUESTIONS, AIMS AND CONCEPTUAL MODEL

The proposed study has three major research questions related to the implementation of Chicago's partial ban on menthol cigarette and flavored tobacco sales in stores within 500 feet of high schools:

1. Do stores affected by the ban comply with the restriction on the sale of menthol cigarettes, and how does this vary by store type and location?
2. How do affected retailers navigate the implementation process across dimensions of (1) perceived profit loss due to the ban; (2) enforcement agency power; and (3) communication and control over the implementation process by government, corporate, and tobacco industry representatives, and how does this vary by store type, location and whether a store complies with the ban on menthol cigarettes sales?
3. How do retailers frame the purpose and intended effect of the partial ban in relation to the youth frame embedded in the design of Chicago's ordinance, and how does this vary by store type?

The following aims correspond to these research questions.

Aim 1: Assess store compliance with restrictions on the sale of menthol cigarettes among a sample of affected stores within 500 feet of high schools, including how compliance varies based on store type and neighborhood location.

Aim 2: Explore how retailers respond to and navigate ban implementation across dimensions of enforcement agency pressure, clarity in policy guidelines, and competing priorities – such as profit loss and pressure from other actors.

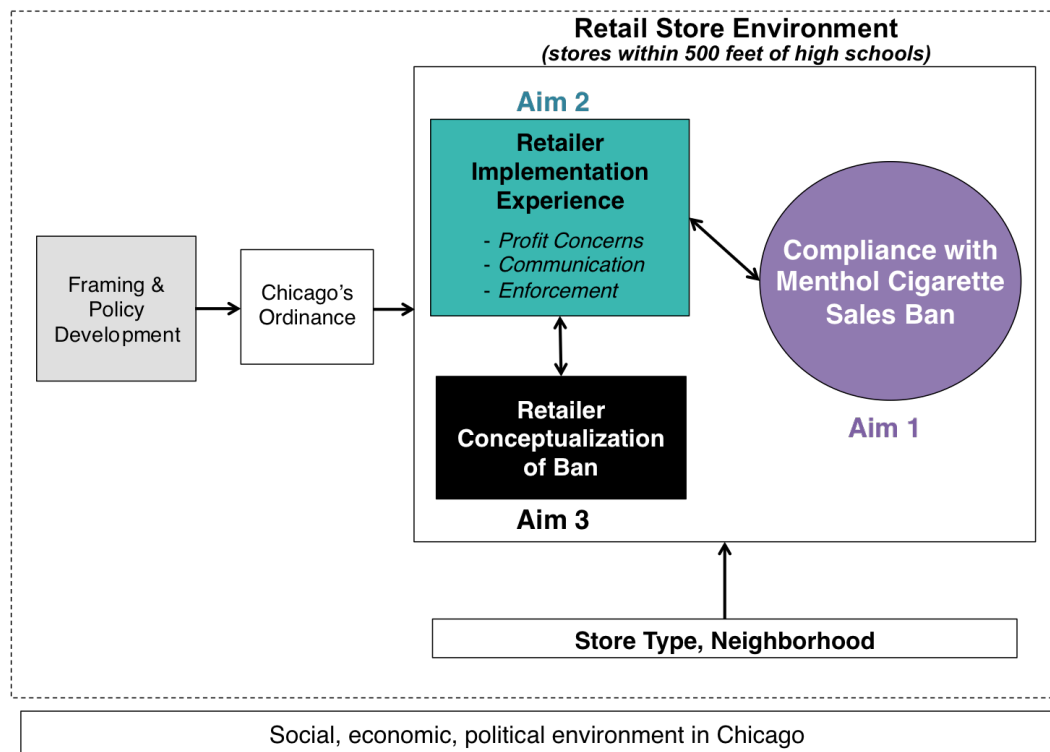
Aim 3: Explore how retailers conceptualize the purpose and intended effect of the partial ban in relation to the youth frame embedded in the design of Chicago’s ordinance to protect youth from tobacco access.

Conceptual Model

The conceptual model depicted in **Figure 2.1.** is a simplified schematic to represent the complex process of policy implementation investigated in this dissertation.

The policy implementation research literature suggests that one discrete outcome of Chicago’s ban is whether retailers in stores within 500 feet of high schools sell menthol cigarettes. However this outcome is situated within the context of the retail store environment. Both policy implementation frameworks and the literature reviewed suggest that priorities and values related to store profitability; communication or guidelines received about the ban from government, corporate and tobacco industry representatives; and the strength of policy enforcement would influence retailers’ experience with ban implementation and compliance. Further, the way in which policymakers frame the issue of menthol cigarettes influences the possible policy solutions that are considered and adopted, including a ban that restricts the sale of menthol cigarettes in those stores within 500 feet of high schools. Retailers’ perception or conceptualization of the ordinance is

Figure 2.1. Conceptual model of relevant constructs related to the implementation of Chicago's partial ban



integrated into the implementation experience and informed by the issue frame used to develop the ban as an effort to protect youth from tobacco use. Finally, the implementation experience occurs within a broader political, social and economic context, which can contribute to how retailers conceptualize the ban and navigate the policy implementation process. Other factors, such as store type and neighborhood location may also influence compliance, the implementation experience and retailers' perception of the ban.

To summarize, this conceptual model highlights key concepts from the literature reviewed and policy implementation approach and it aligns with the study aims of the proposed research. In the following chapters, the methodological approach for this dissertation research and the study results are discussed in more detail.

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CHAPTER 3: STUDY DESIGN AND METHODS

This chapter provides an overview of the methodological approach used in this dissertation study. First, a brief summary of the multi-method case study approach is provided, followed by a description of the research setting. Next, the specific methods used for the quantitative study and the qualitative study, respectively are reviewed in detail. Finally, the chapter concludes with a discussion of the constructivist epistemological approach of this research and the verification methods used to ensure the validity and reliability of the data collected.

MULTI-METHOD CASE STUDY APPROACH

This dissertation used a case study approach to explore the implementation of Chicago's ban on menthol cigarettes and flavored tobacco sales in retail stores within 500 feet of high schools. Case studies allow for in-depth understanding of the real-life context surrounding a unique case, like Chicago's ban, across different analytic methods.¹⁻³ The current case study used multiple methods to a) quantitatively investigate the extent to which retailers complied with the ban on menthol cigarettes specifically and b) qualitatively explore how affected retailers navigated the ban implementation process and framed the purpose and intended outcome of the ban in their community. These complementary methods assessed overlapping but distinct aspects of ban implementation and enhanced the ability of this dissertation project to capture a rich description of data from the point of view of retailers and the retail store.⁴⁻⁶

Data collection took place between June 12, 2017 and September 15, 2017.

Quantitative and qualitative data were collected sequentially, meaning that the sampling frame of the quantitative compliance study informed the sampling frame of the qualitative study.² First, in-store audits were completed to assess compliance with the ban on menthol cigarette sales among a sample of 100 affected retailers. Next, in-depth interviews were conducted with retailers not included in the in-store audits to investigate topics related to ban implementation and overall opinion of the ban. A Johns Hopkins University Bloomberg School of Public Health Institutional Review Board reviewed the dissertation study and determined it to be non-human subjects research.

RESEARCH SETTING: CHICAGO, ILLINOIS

Chicago is a distinct research setting in terms of the demographic composition of the city. The City of Chicago is located in Cook County, Illinois and is the third largest city in the United States and one of the most segregated cities in the country.⁷ From 1990-2010, Chicago had the 9th highest level of Latino-White segregation; the 10th highest level of African American-White segregation; and the 5th highest level of combined racial and economic segregation, which is based on race and household income together.⁸ According to the most recent 2016 U.S. Census American Community Survey (ACS) data, approximately one third of the population identifies as Non-Latino White (33%), 29% identifies as Non-Latino African American and 30% identifies as Latino.⁹ Around 19% of residents in the city live below the poverty level, which is 1.5 times higher than the state of Illinois and the entire Chicago metro area, which includes suburban areas of Illinois, Wisconsin and Indiana.⁹ The South and West sides or regions of the city are more likely to have census tracts where a greater proportion of the

population identify as Latino or Non-Latino African American. These areas are also less affluent and experience greater levels of poverty and housing cost burden.^{10,11} The North side and Central region of the city are generally more affluent and more likely to have census tracts where greater percentage of the population identify as Non-Latino White.^{10,11}

Chicago is also a distinct research setting because of the various city ordinances that affect business in retail stores. In addition to the flavored tobacco sales ban, which includes menthol cigarettes, retail stores were also expected to comply with several other city and county ordinances at the time of data collection. Chicago has the highest cigarette tax rate in the United States at \$7.17 per pack, which combines separate taxes from the city (\$1.18 per pack), Cook County (\$3.00 per pack), the state of Illinois (\$1.98 per pack), and the federal cigarette tax rate (\$1.01 per pack).¹² The current fine for selling cigarettes without a City of Chicago or Cook County tax stamp ranges from \$2,000 to \$10,000.¹³ In July 2016, Chicago also implemented a “21+” rule where it is currently illegal to sell tobacco products to a minor under the age of 21. The fine for violating the age of sale rule ranges from \$1,000 to \$5,000.¹³ Chicago’s Department of Business Affairs and Consumer Protection enforces and writes fines for tobacco tax stamp violations, underage sales violations, and violations of the flavored tobacco ban.^{14,15}

Additionally, at the time that data collection took place Cook County implemented a \$0.10 per ounce sugar sweetened beverage tax. This tax was effective August 2, 2017 and was ultimately repealed by the Cook County Board of Commissioners on October 11, 2017.¹⁶ These examples do not present an exhaustive list of all ordinances that affect stores across the different licenses that they hold (e.g. retail

tobacco license, packaged goods license). However, they do reflect the most relevant regulations brought up across interviews to highlight the unique context of retailers operating business in this setting.

QUANTITATIVE STUDY – COMPLIANCE ASSESSMENT

As previously mentioned, the compliance assessment was conducted first. Data collection for this study took place between June 12, 2017 and June 16, 2017. A single team of data collectors visited a sample of 100 affected stores to assess whether the store sold menthol cigarettes and whether menthol cigarette replacement packs were present.

Study Sample

A list of 154 retail stores within 500 feet of high schools was provided by the Chicago Department of Public Health (CDPH). This list represented the full census of retail stores affected by the ban, last updated April 2017. From this list, a stratified random sample of 100 stores was selected to assess compliance with the ban on menthol cigarette sales. Each store was geocoded using the online US Census Geocoder batch geocoding function (<https://www.census.gov/geo/maps-data/data/geocoder.html>). Stores were then assigned to one of Chicago's 77 community areas. This is a larger geographic region that encompasses multiple neighborhoods and is frequently used by CDPH and other agencies in city planning efforts.¹⁰ Each community area was assigned a Hardship Index score retrieved from publicly available data from the CDPH Epidemiology and Public Health Informatics team. The Hardship Index score was based on six indicators: crowded housing, poverty, income, education, unemployment, and proportion of residents under 18 or over 64 in a community area.¹⁷ These data were based on US Census ACS 5-year estimates (2008-2012). Each indicator was equally weighted to create

a final hardship score ranging from 1-100, where a higher score reflected worse economic conditions. Scores were then categorized into three groups: Low (score 1-33), Medium (score 34-66), and High (score ≥ 67).

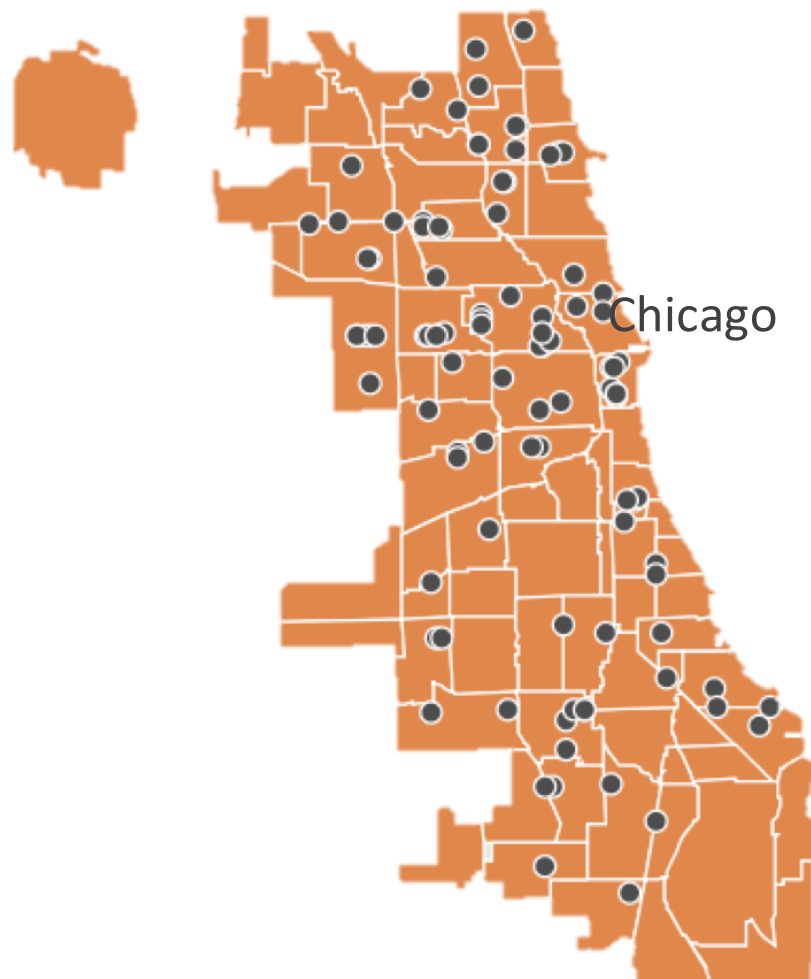
Next, the sample of 100 stores was selected through stratified random sampling proportionate to the number of stores located within each Hardship Index category (Low, Medium, High). Within the census of 154 stores located within 500 feet of a high school, 39.6% (n=61) were located in a Low Hardship Index community area, 27.3% (n=42) were located within a Medium Hardship Index community area, and 33.1% (n=51) were located within a High Hardship Index community area. These proportions represent the probability of store selection (**p**) for each Hardship Index category. **Table 3.1.** provides information on the design weight calculation for each category.

Table 3.1. Sampling design weight calculations for quantitative compliance assessment

Hardship Index Category	p	1/p (design weight)
Low	61/154 = 0.396	1/0.396 = 2.525
Medium	42/154 = 0.273	1/0.273 = 3.663
High	51/154 = 0.331	1/0.331 = 3.021

The final analytic sample included in this study was 90 tobacco retailers. In total, five stores were permanently closed and no data collected. The other five stores did not sell any tobacco products at the time of data collection. Follow-up calls to the storeowner or store manager determined that three stores never sold tobacco and two stores stopped selling tobacco prior to the ban's implementation date of July 2016. **Figure 3.1.** displays the location of these 90 stores throughout the city.

Figure 3.1. Map of the stores included in the compliance assessment study (n=90)



Data Collection Procedures

Prior to data collection, a comprehensive data collection protocol was developed which included a copy of the assessment tool and defined all variables on the data collection form, listed the routes of data collection for each day, and outlined the procedure for how to behave in the store.^e The data collection tool and protocol were developed based on previous studies and expert opinion.^{18,19} The assessment captured information on store type, presence of menthol cigarette advertising on the interior and exterior of the store, presence of menthol cigarette replacement packs, and whether menthol cigarettes were sold to the research team. All data collection was done covertly, meaning that the research team did not announce their presence in the store or purpose of the study. A smartphone application, doForms, was used to capture data. A single team of two trained researchers – one of whom was the student investigator, LC – visited all selected stores.

Outcome Measures

The main outcome for this study was compliance with the ban on menthol cigarette sales. This was determined by whether menthol cigarettes were sold in affected stores (yes/no). This study did not assess compliance with the sale of other flavored tobacco products, including menthol-flavored cigars or chewing tobacco. A store was marked as compliant if it did not sell a pack of menthol cigarettes to the research team. To assess compliance, the student investigator, LC asked the clerk in each store to purchase a pack of Newport menthol cigarettes. Newport menthol cigarettes were selected because they are the most popular menthol cigarette brand sold in the US and widely available in Chicago.^{20,21} If unavailable, LC asked for another menthol cigarette

^e Copies of the assessment tool and variable glossary are available in the Appendices section.

brand. As a final step, all stores marked as non-compliant were checked against the enforcement agency's list of stores in the appeals process. Storeowners were allowed to formally challenge whether their store was subject to the ban (e.g. distance between store and school believed to be greater than 500 feet). Stores in the appeal process were still able to sell flavored tobacco while the appeal was processed.^{15,22} In total, two stores that sold menthol cigarettes (i.e. originally marked as non-compliant) were in the appeals process at the time of data collection. Thus, these store were marked as compliant in the final analysis because they were still affected by the ban and following the regulation by engaging in the formal appeals process.

The secondary outcome of this assessment was whether menthol cigarette replacement packs were available in affected store (yes/no). This was an exploratory outcome based on visual observation of the cigarettes for sale. Additionally, LC also asked the store clerk if there was anything like menthol cigarettes for sale if the data collection team was told that no menthol cigarettes were sold in the store (e.g. "Do you have anything like a pack of menthol cigarettes for sale?"). Due to its exploratory nature, the data collection team had a broad concept of what counted as a menthol cigarette replacement pack. These packs were broadly conceptualized as cigarette packs intended to communicate to consumers that they were a substitute product for menthol cigarettes (e.g. featuring green as a prominent color or claiming the product was "redesigned without menthol" as was observed in the study conducted by Brown et al.²³). The data collection team purchased any cigarette pack that they suspected was marketed as a substitute for menthol cigarettes.

Menthol Advertising

Product advertising is an important component of the retail environment and has been associated with smoking susceptibility and difficulty quitting.²⁴ Therefore, this study also explored whether menthol cigarette advertising was present in affected stores and how this varies based on whether the store was compliant. Menthol cigarette advertising was defined as any sign/poster, price promotion, or branded functional ad (e.g. counter mat). This study collected information on the type of advertising and whether it was present on the interior (yes/no) and exterior of the store (yes/no).¹⁸

Independent Variables

The independent variables included in this quantitative analysis are described below. Some factors reflect constructs of interest related to research setting (e.g. geographic region) or important control variables (e.g. number of tobacco outlets in area). Others factors were selected based on previous literature that demonstrated that store type,²⁵⁻²⁷ distance to a high school,²⁵ and neighborhood characteristics^{25,28} were associated with store compliance with other tobacco control regulatory efforts.

Store Type

Store type was based on the following categories: independent convenience store, gas station, chain convenience store, grocery store, liquor store, pharmacy, dollar discount store, and “Other,” which included restaurants and a tobacco accessory store/general retailer.

Distance to High School

CDPH provided the name, address and distance of each high school within 500 feet of each affected store. Distance to a high school was dichotomized to reflect differences between those stores within 250 feet of a high school (approximately 1 city

block or less) versus those between 251-500 feet of a high school (1-2 city blocks). This cutoff was chosen to reflect any differences between stores closer in proximity to schools versus those further away using a practically meaningful distance measure. In five cases, more than one high school was located within 500 feet of a store. The school with the shortest distance to the store was included in the analysis.

High School Type

High schools were categorized as public or private high schools. Public high schools were identified by address using the publicly available data file from Chicago Public Schools, academic year 2016-2017.^f If a high school was not listed in this data file (i.e. a public school), an Internet search of the schools website or other available information was conducted to confirm that it was a private school. In the cases where more than one high school was located near a store, the school type of the closest school was included in the analysis (n=5).

Neighborhood Level Demographics

Neighborhood was defined as the census tract. ArcGIS Online was used to link stores to neighborhood-level characteristics, which included proportion of residents living under the poverty level, percentage of residents < 18 years old, and proportion of non-Latino White, non-Latino African American, and Latino residents. These estimates were derived from US Census ACS 5-year estimates (2011-2015). In the descriptive analyses, racial/ethnic composition of the census tract was determined by the proportion of residents who identified as non-Latino White, non-Latino African American, and Latino. These variables were categorized by the following cut points <25%, 25-60%, >60% and

^f This information was retrieved from the following link: <https://data.cityofchicago.org/Education/Chicago-Public-Schools-School-Locations-SY1617/9zky-nrsy>

were consistent with a previous study investigating differences in air pollution exposure by racial composition of neighborhoods in Chicago and other major cities.²⁹ The proportion of residents under 18 years old and proportion of residents living below the poverty line were categorized into the following categories: < 15%, 15-30%, and >30%. These cut-offs were chosen for ease of interpretation and reflect the distribution of the study data into tertile categories on these factors.

Tobacco Retail Outlets in the Neighborhood

We accounted for total number of tobacco retail stores in the census tract (< 4 stores, \geq 4 stores) as control measure for number of retailers in the neighborhood. The measure of tobacco outlets in the neighborhood was dichotomized at the median value of stores in a census tract (<4 store vs. \geq 4 stores). This cut-point was confirmed using a lowess smoothing regression plot.

Geographical Region

Larger regional variation was captured by including the location of the store in relation to the city center (Central, North, West, and South).

Table 3.2. presents the distribution of the independent variables across the full census of 154 stores and the study sample of 100 stores. The characteristics of the analytic sample (n=90) are provided in the Results section of Chapter 4.

Table 3.2. Distribution of independent variables for the full census and selected sample

	Full Census (n=154)	Selected Sample
	% (n)	% (n)
Store Type		
Independent Convenience Store	24.7 (38)	26.0 (26)
Gas Station	27.3 (42)	30.0 (30)
Chain Convenience Store	6.5 (10)	5.0 (5)
Grocery Store	12.3 (19)	11.0 (11)
Liquor Store	11.7 (18)	10.0 (10)
Pharmacy	4.6 (7)	6.0 (6)
Dollar Discount Store	5.8 (9)	6.0 (6)
Other	7.1 (11)	6.0 (6)
Distance to Nearest High School		
≤ 250 feet	39.6 (61)	35.0 (35)
251-500 feet	60.4 (93)	65.0 (65)
Type of High School		
Private	26.6 (41)	29.0 (29)
Public	73.4 (113)	71.0 (71)
Tobacco Retail Outlets in Neighborhood		
< 4 stores	41.5 (64)	41.0 (41)
≥ 4 stores	58.6 (90)	59.0 (59)
Neighborhood Characteristics (Census		
<i>% Non-Latino White residents</i>		
< 25%	52.6 (81)	55.0 (55)
25% - 60%	31.2 (48)	31.0 (31)
> 60%	16.2 (25)	14.0 (14)
<i>% Non-Latino African American residents</i>		
< 25%	57.1 (88)	56.0 (56)
25% - 60%	7.8 (12)	8.0 (8)
> 60%	35.1 (54)	36.0 (36)
<i>% Latino residents</i>		
< 25%	59.7 (92)	61.0 (61)
25% - 60%	21.4 (33)	21.0 (21)
> 60%	18.8 (29)	18.0 (18)
<i>% < 18 years old</i>		
< 15%	26.6 (41)	25.0 (25)
15-30%	56.5 (87)	58.0 (58)
> 30%	16.9 (26)	17.0 (17)
<i>% Living Below Poverty Line</i>		
< 15%	27.9 (43)	27.0 (27)
15-30%	39.0 (60)	37.0 (37)
> 30%	33.1 (51)	36.0 (36)
Geographic Region		
Central	9.1 (14)	9.0 (9.0)
North	28.6 (44)	29.0 (29)
West	31.8 (49)	31.0 (31)
South	30.5 (47)	31.0 (31)

Statistical Analyses

All analyses were conducted using Stata (version 14.2). Each store in the sample was assigned a design weight based on the Hardship Index Category from which it was selected (Low, Medium, High). Pearson χ^2 test were used to describe associations between compliance and menthol advertising, store type, school and neighborhood-level factors, and geographic region. Logistic regression modeled the independent effect of each independent variable on odds of ban compliance (Crude). Models were subsequently adjusted for store type and school-level variables (Model 1) and then further adjusted for neighborhood-level characteristics (Model 2). In these models, chain convenience stores, grocery stores, liquor stores, pharmacies, dollar discount stores, and other stores were combined into the category “Larger or Chain Store.” Demographic characteristic were treated as continuous but divided by 10 to create a scaled variable. Thus, each 1-unit change in the variable reflected a 10% increase in the characteristic.²⁸ Goodness of fit tests suggested better model fit when using demographic variables treated as continuous rather than categorical variables. Due to high correlation with other census tract variables and multicollinearity, we did not include proportion of non-Latino White residents or geographic region in the regression models. Tests of associations were two-tailed (alpha = 0.05).

Results from the analysis are provided in Chapter 4 via textual description and tables presenting the statistical results.

QUALITATIVE STUDY – RETAILER INTERVIEWS

Qualitative interviews with retailers were carried out following the compliance assessment. The student investigator, LC conducted semi-structured interviews in stores across Chicago. Interviews took place between August 14, 2017 and September 15, 2017.

Sampling Approach

The sampling frame for this study was the 54 stores not included in the compliance assessment. The primary reason for not recruiting retailers from the 100 stores already included in the compliance assessment was to reduce the potential for ethical conflict given LC's involvement in both studies. Excluding these 100 stores likely reduced any complications of the retailer recognizing LC or questioning the motivation for the previous visit to the store. Additionally, keeping the two studies separate protected the sensitive information collected on compliance. Finally, recruiting retailers to participate in in-depth interviews from the remaining 54 stores enhanced the ability for LC to have an open and transparent rapport with the participants, without requiring she disclose that the store had been included in the previous study.

In total, 51 of the 54 stores were contacted in order to recruit retailers to participate in the study. One chain convenience store was not contacted because it was located nearby to a similar chain convenience store already included in the study. This perspective was considered adequately represented in the data previously collected. Two other stores were not contacted because they were exclusively bar-restaurants only open during the evening. It was determined by the study team that the perspective of these establishments was not as relevant to the study aims as other more conventional tobacco vendors.

Participant Eligibility

To be eligible to participate, retailers had to be 18 years of age or older, English speaking, and work in or own a store that sold tobacco products prior to the ban implementation date of July 2016. Stores were approached up to five times to participate. Of the 51 stores contacted, 13 refused to participate, three stores were permanently closed, three stores were excluded because they never sold tobacco products, and one store was excluded because the clerk exclusively spoke Spanish. A total of 35 retailers in 31 stores across the City of Chicago were interviewed for this study. Retailers included 15 managers, 13 owners, and seven clerks. In four stores, two individuals who worked in the store participated in the interview. In one case, two clerks participated; in another case, one clerk and one manager participated; and in two cases, two managers participated.

Participating Store Characteristics

Overall, half of the interviews were completed in independent convenience stores (n=8) or gas stations (n=8, *one corporate-owned chain store, seven franchise-owned chain stores*). The remaining interviews were conducted in liquor stores (n=4), grocery stores (n=4, *two corporate-owned chain stores, two independent stores*), franchise-owned chain convenience stores (n=4), liquor dollar discount stores (n=2, *one corporate-owned chain store, one independent store*), and one “Other” store – a mass merchandiser with a convenience store located within a complex that included two cellular phone stores and furniture/electronics store. The location of the 31 stores by store type across the city is also displayed in **Figure 3.2**.

Figure 3.2. Map of the stores included in the study by store type and across the City of Chicago (n=31)

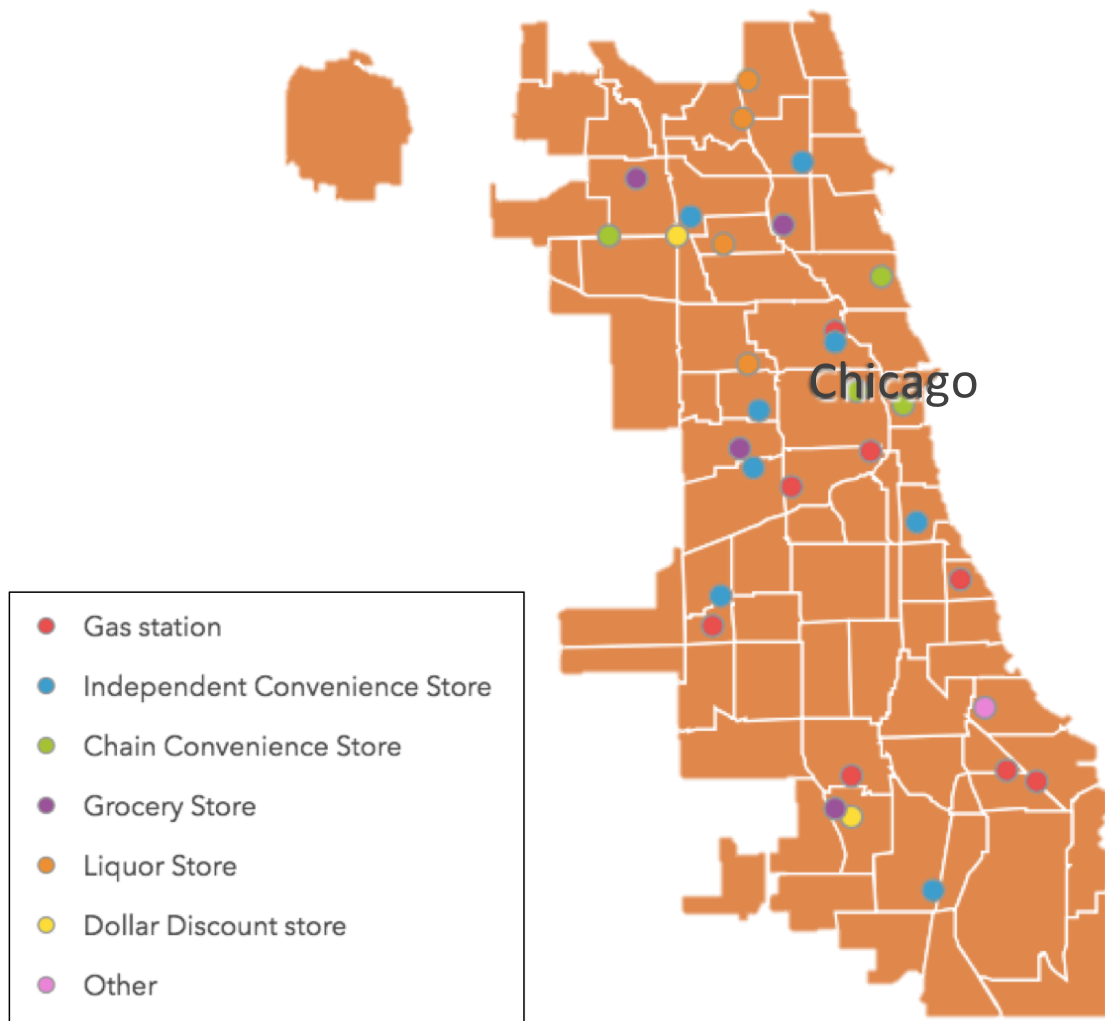


Table 3.3. provides the characteristics of the 31 stores across key characteristics. At the time of data collection, four of the 31 stores – all gas stations – had appealed (n=1) or were currently in the appeals process (n=3) to contest that their store location was affected by the ban. Additionally, five stores sold menthol cigarettes. These stores were considered non-compliant in the analysis presented in Chapter 5, consistent with the definition used in the compliance assessment. Compliance was defined in terms of menthol cigarette sales only given the reported burden of menthol cigarette use and interest in efforts to regulate their sale.³⁰⁻³³ However, it should be noted that the results presented in Chapter 5 discuss the sale of other flavored tobacco products (e.g. cigars) as part of the global implementation experience and consider the challenges associated with determining what is a menthol cigarette or other flavored tobacco product based on the product name and packaging.

Finally, stores were also characterized by the following neighborhood factors: ethnic/racial composition of neighborhood residents and the proportion of residents living below the poverty line. Neighborhood was also defined as the census tract in which the store was located, based on the United States 2010 Census. Estimates of the racial composition of residents and proportion of residents living under the poverty level were derived from the U.S. Census ACS 5-year estimates (2011-2015). The same categories for the variables (e.g. proportion of Latino residents) that were used in the quantitative compliance assessment study were also used to describe the location of these stores. In total, 25 stores were located in neighborhoods where more than 60% of the residents in the store's census tract identified as Non-Latino African American (n=12), Non-Latino White (n=6), and Latino (n=7). The majority of stores were located in neighborhoods

where 15-30% of residents lived below the poverty line (n=20), while the remaining stores were located in areas where less than 15% (n=7) or more than 30% (n=4) of residents lived below the poverty line.

Table 3.3. Key characteristics of the 31 stores included in the qualitative study

	Participating Stores (n)
Store Type	
Independent Convenience Store	8
Gas Station	8
Chain Convenience Store	4
Grocery Store	4
Liquor Store	4
Dollar Discount Store	2
Other	1
Appealed/Currently Appealing Ordinance	
Yes	4
Sold Menthol Cigarettes	
Yes	5
Neighborhood Characteristics (Census Tract)	
<i>Racial/Ethnic composition</i>	
> 60% residents identify as Non-Latino African	12
> 60% residents identify as Non-Latino White	6
> 60% residents identify as Latino	7
<i>% Living Below Poverty Line</i>	
< 15% residents	7
15-30% residents	20
> 30% residents	4

Data Collection

As previously mentioned, LC conducted all interviews for this study. For every store included LC documented whether menthol cigarettes were sold. Separate interview guides were used for compliant and non-compliant stores, however, both guides covered similar topics. These topics included overall opinion on the ban; changes or anticipated changes to profits and customers; changes or anticipated changes to products sold in the

store due to the ban; communication with city government, tobacco company, and corporate office representatives (*for corporate or franchise-owned chain stores only*); and experience with the enforcement agency. All interviews were semi-structured, meaning that participants were asked about the same topic; however, LC introduced additional questions to follow-up on emerging ideas or leads in the conversation. Each participant was offered a \$25 gift card; in cases where more than one retailer participated in the interview both retailers were offered a gift card.

In total, 28 of the 31 store interviews were considered full interviews. These interviews lasted 18 minutes on average and covered the main concepts of the interview guide. Three interviews were considerably shorter (less than 5 minutes). These interviews were all conducted with store managers of grocery stores (two corporate-owned; one independent) that did not sell menthol cigarettes. The shortened length of these interviews was due to time constraints faced by participants who needed to return to their responsibilities on the store floor. These participants provided information on the ban implementation experience, particularly related to perceived profit loss and changes to products sold in the store. However, they were not able to participate in a longer interview to discuss additional topics and no other retailer was available to participate in additional interview.^g

In total, 13 of the 31 interviews were not audio-recorded. When a participant declined to be audio-recorded, LC recorded a voice memo directly after the interview to summarize the topics discussed and the information provided by the respondent. This approach was used to capture the remembered scene as quickly as possible.³⁴ Following

^g In the manuscript presented in Chapter 6, the data collected from these three retailers was excluded from the analysis because the content discussed did not relate to the topics explored in that paper.

every interview, LC wrote a detailed summary that described the participant and the setting, summarized the key topics discussed, and identified emerging themes. Each memo also included a section for reflexive comments, which captured how LC's identity as a White woman, as well as her reactions and biases may have influenced the interview and her thoughts around emerging themes. When possible, handwritten notes were also taken during the interview to assist in drafting summaries and voice memo recordings.

Data Analysis

The main unit of analysis was the 31 retail stores. In the four cases where two retailers participated in the same interview, the information collected from both retailers was analyzed together to reflect the viewpoint of the store. Each store was assigned a unique store number (e.g. store # 56). All recorded interviews or voice memos were transcribed verbatim by a professional transcription service. All transcripts were double-checked for accuracy.

LC coded all transcripts for analysis. The use of the same data collector and single-coder ensured continuity of the research instrument and preserved the depth of analysis by integrating the same conceptual perspective throughout the study from design decisions made in the field to the interpretation of data.^{35,36} Given the interpretive nature of qualitative data analysis, it is unlikely that double coding would have provided a meaningful inter-rater reliability score without reducing the richness of analysis by simplifying the coding scheme or textual interpretation to achieve rater agreement.³⁵

The coding and analysis followed Yin's protocol for compiling, disassembling, and then reassembling the data for interpretation.³⁷ First, all transcripts and memos were compiled into the qualitative data management software MaxQDA (Version 12).

Documents were coded by store type, whether the store sold menthol cigarettes, and the characteristics of the store neighborhood (i.e. racial/ethnic composition, proportion of residents living in poverty). All documents were first read for familiarity and no notes were taken at this time. After this initial reading, LC read the documents a second time and noted concepts and ideas emerging from the data, which were used to inform future codebook development. In the disassembling step, the codebook was developed. LC read the transcripts once again and drafted detailed analytic memos on emerging codes. Similar codes were collapsed together to develop a draft codebook, which contained the definition for each code, guidelines for how to use the code, and examples from the data. An iterative process was used to refine and finalize the codebook: LC applied the draft codebook to existing transcripts and codes were revised or added until a final version was developed. The codebook was considered “final” once the salient concepts related to the study aims were sufficiently captured and no new topics emerged as the final codebook was applied to subsequent transcripts.³⁷ Codes included key analytical topics such as profit loss, strategies used to mitigate profit loss, sources of information about the ban, change in access to menthol cigarettes, measuring 500 feet, and experience with enforcement agency visits in the store. Once finalized, LC systematically applied the final version of the codebook to each transcript. In the last step, coded transcripts were reviewed and reassembled to identify higher-order themes by comparing the meaning of codes across transcripts. Through this process, LC identified patterns in the data, including any similarities and differences in these patterns across store type, compliance with the ban on menthol cigarette sales, and neighborhood characteristics.

Results from the analysis are provided in Chapter 5 and Chapter 6. These findings are presented via summaries and exemplary quotations. Quotes were edited for clarity, such as removing filler words, deleting repetitive phrases, and correct grammar to improve readability. However, the meaning of the quote was not changed. Speakers are identified by unique store number and store type.

EPISTEMOLOGICAL APPROACH TO DATA COLLECTION AND VERIFICATION STRATEGIES FOR VALIDITY AND RELIABILITY

The methods discussed were informed by a constructivist approach to data collection and interpretation. A constructivist point of view considers how data collectors and research participants co-construct study data based on how they experience, process, and label their interactions.^{h,38-40} Therefore, in this dissertation research it becomes critical to acknowledge how the researcher(s) influenced data collection and the construction of data in the study environment.⁴⁰ Additionally, it is also imperative to discuss the methodological rigor of the study methods in terms of the strategies used to verify the validity and reliability of the results. According to Morse et al., verification is “a process of checking, confirming, making sure, and being certain” that takes into account processes to ensure validity and reliability inherent to a particular method.⁴¹ In quantitative research, verification often relates to checking the validity and reliability of discrete measures (e.g. compliance) often at certain time points during the research design or data collection phase.⁶ In qualitative research, verification steps are often more iterative and fluidly woven into the entire data collection and analysis process.⁴¹ The

^h In, “Qualitative Research in Counseling Psychology: A Primer on Research Paradigms and Philosophy of Science,” (*Journal of Counseling Psychology* 2005, Vol. 52, No. 2, 126–136) Joseph G. Ponterotto provide a more extensive consideration of research paradigms, including their historical and philosophical orientation.

following sections discuss the verification efforts used to enhance validity and reliability of the quantitative and qualitative studies included in this dissertation and locate the role of the researcher(s) in these processes.

Validity, Reliability, Role of the Researcher – Compliance Assessment

The outcome measures used in the compliance assessment possessed several forms of internal validity commonly discussed in quantitative research.⁶ First, the outcome measure of compliance with the ban on menthol cigarettes sales had strong face and content validity. With respect to face validity, asking to purchase Newport menthol cigarettes – one of the most common menthol cigarette products – in a covert manner simulated a typical exchange between a customer and retailer. In terms of content validity, initially asking for Newport menthol cigarettes and then asking for the universe of menthol cigarettes available improved content validity, or the extent to which the measure represented the full range of the construct in the retail environment. Additionally, the descriptors used to identify menthol cigarette replacement packs had face validity because they were based on evidence generated from Brown et al.'s study of menthol cigarette ban compliance in Canada.²³ Further, the concept of menthol cigarette replacement packs was expanded while data collectors were in the field.

In terms of external validity or generalizability, it is likely that the results of the compliance study could apply to other medium or large cities with a similar distribution of non-White residents that enact a partial menthol cigarette ban. More generally, these results can inform advocates and policymakers in terms of how they make decisions around the development and implementation of draft ordinances for menthol cigarette bans in other urban jurisdictions.

However, it is important to note the role of the researcher in construction of the data collected on compliance with the menthol cigarette sales ban. The use of the same single data collection team, each of whom performed the same role throughout data collection, improved the consistency or reliability of the results, yet it is possible that this approach may not have captured all stores that only sell menthol cigarettes to known regulars. The data collection team for this study was comprised of the student investigator (LC) and a research assistant (C.B.). L.C identified as a Non-Latino White woman in her early 30s and C.B. identified as a Latino man in his early twenties. Both data collectors dressed in plain clothes, acted like a customer by making a small purchase (e.g. bottle of water), and did not announce their presence as researchers or the purpose of their visit. This approach reduced the likelihood that the store staff perceived the team to be representatives from the enforcement agency, who are required to announce their presence and have free range to search a store.¹³ It is possible that store clerks perceived that the data collection team's presence in the store was part of an undercover assessment, similar to undercover visits conducted by city officials to assess whether a store sell tobacco products to minors.

Further, retailers who may normally sell menthol cigarettes to a regular customer or perceived neighborhood resident may have been resistant to selling menthol cigarettes to the data collection team, particularly LC, if they perceived that she did not look or act like a typical customer. Therefore, the position of the data collection team as researchers and their social identities, which often mismatched the social identities of typical customers of a store, were important to the constructing the data analyzed in this study. As such, the social location of the researchers, along with the validity and reliability of

the data collection approach, should be considered when interpreting the results of this study.

Validity, Reliability, Role of the Researcher – Qualitative Interviews

There is a wide range of nomenclature to define validity and reliability in qualitative research.^{6,41,42} In this particular study, validity and reliability were most closely aligned with Patton's conceptualization of credibility in qualitative inquiry and Morse et al.'s verification strategies to enhance rigor throughout qualitative research.^{41,43} According to Patton, the credibility of the researcher is dependent on a prepared mind's ability to notice and observe patterns in data. Patton suggests that the preparation of the researcher in this endeavor relies on experience and training, active reflection on the researcher as the research instrument, and the use of rigorous verification strategies to enhance data collection and analysis throughout the study period.^{41,43}

Training of the Student Investigator

Throughout her doctoral student training, the student investigator was exposed to a well-rounded mixture coursework on qualitative inquiry. These courses discussed the paradigmatic approach of qualitative research, the variety of qualitative data collection methods that could be used to answer different research questions, and how to collect, analyze and report such research through an applied public health perspective and through ethnographic approaches. In this dissertation study, LC also had access to several experienced senior qualitative investigators. This team of researchers was utilized to inform the design of the study, including the sampling approach and the data collection tools. Additionally, LC maintained active contact with her thesis advisor throughout the

study to assess her approach to the research, sampling strategy, and any modifications made.

Active Reflection on the Role of the Researcher in Constructing Data

LC utilized the summaries written after interviews to reflect on how her social identity and position as a student researcher was involved in the creation of the data. Oftentimes, LC would remark in her summaries that a retailer had a lot to say or needed a platform to discuss the influence of different rules or ordinances on their business. To LC, her position as a student often facilitated what she considered to be a more open conversation. For example in one summary, she writes:

He very much wanted to share his story and launched into it before I was able to record. He was incredibly candid about illegal sales and went on record for everything. In his interactions with customers, he wanted to please them and help them out. I think this is his nature and he wanted to share his story to help me out as a student doing a research project and get the information out there to other people.

However, in a few cases LC felt as though her identity as a woman, student, and outsider led to skepticism and reserve on the part of the research participant. In a few cases, she described feeling small with respect to the men she interviewed. In one setting, she interviewed a participant seated while they stood over her. In these cases, LC reflected that the data constructed was potentially less rich and led to some “mistakes” on her part that needed to be corrected. For example, after an interview that took place early on in the study she wrote:

I felt very foolish and small in our exchange, which made me feel like I forgot to ask a key question of why do you comply. I have written explicit notes on the guide to ask that now. We did not have good rapport but I tried to use some “tell me more about that” probes, which was good. He was cold and skeptical and it did not make the interview feel very comfortable and I did not perform super well.

In these situations, LC acknowledged how her dynamic with the participant limited the construction of the data. These notes were helpful both in improving the data collection process, supporting her growth as a researcher, and offered context during the analysis phase to better understand the environment in which the responses took place.

These summaries were also a place for LC to reflect on how her own viewpoints regarding the ban shifted as she talked to different retailers and negotiated meaning about the ban in these different contexts.⁴⁰ Patton describes the need for an interviewer to maintain “empathetic neutrality” – an oftentimes herculean task of remaining neutral about the results while being viewed as caring or interested in what a subject says.⁴³ Frequently, LC would discuss the conflict between maintaining a neutral position and feeling sympathetic to the participant’s point of view. For example, after one interview LC writes:

I found myself wanting to make things better for him because what he was saying about hurting as a business-person made him sympathetic to me. This was hard because I found myself thinking how much a ban could hurt business, that we do impose these regulations in public health, and losing sight of my macro groundings in the reason why we attempt structural intervention. I am not sure

how much this impacted our conversation but it was coming up for me in that moment.

The summaries provided the opportunity for LC to reflect on the challenges of negotiating and maintaining a position of empathetic neutrality and how this impacted the co-construction of the data. Further, assessing this internal conflict was part of the analysis process. This active reflection helped LC to process how the perspective of business owners conflicted and aligned with the public health perspective across interviews.

Verification Strategies to Enhance Validity and Reliability

Verification strategies were woven into all processes of the study to ensure reliability and validity of the data.⁴¹ Both Patton and Morse et al. discuss verification strategies related to methodological coherence between data collection and the research questions, maintaining an active analytic stance, and sampling adequacy.^{41,43} Throughout the study, these three techniques were used concurrently to enhance validity and reliability of this approach to data collection and analysis.

The written summaries completed after each interview provided the opportunity to reflect on the methodological coherence between the data collected and the research questions, including the extent to which LC needed to modify the interview guide to capture more information on emerging areas relevant to the study aims. For example, questions were added to the guide related to general experience with enforcement agent visits because this was a key topic of interest to retailers and directly related to the research questions regarding ban implementation experience.

Further, LC maintained an active analytical stance by collecting and analyzing data concurrently through the use of these summaries to determine what was known and what needed further exploration related to the research questions.⁴¹ This iterative process ensured congruence between research questions, the literature, and analysis and was heavily dependent on the consistency of LC as the research instrument.³⁶ Throughout the study, LC determined whether additional data sources or theoretical perspectives were needed to address existing or emerging research aims of the study. For example, the introduction of issue framing was a relevant theoretical framework that enhanced the analysis of the data presented in Chapter 6.

Finally, sampling adequacy involved assessing whether the sample was appropriate to the research questions and if the participants selected best represent knowledge on the research topic.⁴¹ Throughout the study, careful attention was paid to the different types of store included in the study and whether the viewpoint of stores from each category was adequately represented. For gas stations and convenience stores, a greater number of these stores were included in the sampling frame making saturation of opinion more feasible to assess. Yet, for some store type categories it was not possible to interview as many retailers due to the constraints of the sampling frame. However, every effort was made to outreach and recruit all available retailers from under-represented retailers (e.g. dollar discount stores) available in the sampling frame.

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CHAPTER 4, MANUSCRIPT #1

Compliance with the City of Chicago's Partial Ban on Menthol Cigarette Salesⁱ

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ABSTRACT

Introduction In the US, menthol cigarettes are associated with smoking initiation and decreased likelihood of cessation, particularly for low-income and non-White populations. Local ordinances to restrict menthol cigarette sales are an emergent policy option. In July 2016, Chicago, Illinois became the first major US city to ban menthol cigarette sales within 500 feet of high schools. This study assessed ban compliance in June 2017.

Methods We randomly selected 100 of 154 stores within 500 feet of a high school. Ninety stores were included in the analysis, excluding permanently closed stores or stores that did not sell tobacco prior to the ban. Compliance was determined by whether a menthol cigarette pack was purchased. We also assessed presence of menthol cigarette replacement packs. Multivariable logistic regression modeled compliance by store type, school (distance to high school, school type), and neighborhood-level factors (poverty level, proportion of non-White residents).

Results Compliance rate was 57% (weighted, n=53) and no replacement packs were observed. Non-compliant stores were more likely to advertise menthol cigarettes, but ads were present in eight compliant stores. Gas stations had 81% lower odds (OR=0.19, 95%CI:0.06-0.58) of complying with the menthol cigarette ban compared to larger/chain stores. School-level and neighborhood factors were not associated with compliance.

Discussion The poor compliance observed with Chicago's partial menthol cigarette ban highlights the need for comprehensive efforts. Optimizing local resources to target enforcement efforts in gas stations could improve compliance. Ordinances that also restrict advertising could potentially enhance ban impact by reducing exposure to product and promotions.

INTRODUCTION

In recent years, market share of menthol cigarettes in the United States has grown and prevalence of menthol cigarette use has remained stable or increased across demographic groups.^{1,2} Menthol makes cigarettes more palatable and menthol cigarettes are associated with greater likelihood of initiation, progression to established smoking, and decreased likelihood of cessation, particularly for African American and Latino populations.³⁻⁹ Menthol cigarettes are more likely to be advertised and sold in low-income, African American, and Latino communities across the United States,¹⁰⁻¹² and neighborhoods with a larger proportion of residents less than 18 years old.^{12,13}

In 2009, the Family Smoking Prevention and Tobacco Control Act (FSPTCA) banned the sale of cigarettes with a characterizing flavor but excluded menthol.¹⁴ Under the FSPTCA, the U.S. Food and Drug Administration (FDA) has the authority to issue a product standard to ban menthol cigarettes.¹⁴ However, the FDA has yet to act on a menthol ban. In the absence of national regulation, local retail policies have become a pathway to regulate access to flavored tobacco, including menthol cigarettes.¹⁵ The FSPTCA preserves localities' ability to adopt a "measure relating to or prohibiting the sale" of tobacco products.¹⁴ Several cities have used this authority to ban the sale of flavored tobacco products, like cigarillos and smokeless products in retail stores.¹⁶

Effective July 2014 but implemented July 2016, Chicago became the first major US city to ban the sale of menthol cigarettes as part of its ban on all flavored tobacco products in stores within 500 feet of schools.^{16,17} Chicago's ban applies to

stores that make less than 80% of profits from the sale of tobacco and tobacco accessories.¹⁷ Initially, this ban extended to retail stores within 500 feet of elementary, middle, *and* high schools; however, political pressure from a retail group association resulted in a December 2016 City Council vote to limit the ban to stores within 500 feet of high schools, effective February 2017.^{17,18} Other localities have taken similar action to ban menthol cigarettes through partial and comprehensive efforts. In January 2017, Berkeley, California enacted a flavored tobacco ban, including menthol cigarettes, in stores within 600 feet of schools.¹⁹ Recently, Minneapolis and St. Paul, Minnesota and Oakland, California passed comprehensive bans that restrict menthol cigarette sales to specialty tobacco stores in 2018.²⁰⁻²² In 2017, the San Francisco Board of Supervisors passed a city-wide flavored tobacco ban, which included menthol cigarettes; however, an R.J. Reynolds-supported campaign successfully petitioned for a public vote on the measure, reflecting opposition by the tobacco industry.²³

Given the growth of local efforts, assessing compliance with Chicago's partial menthol cigarette ban can inform current and future enforcement efforts and provide support for stakeholders as they develop policies to regulate menthol cigarette sales. To date, only a handful of studies have evaluated compliance with a flavored tobacco ban. These studies suggest that stores comply with comprehensive flavored tobacco bans such as the FSPTCA flavored cigarette ban,^{24,25} New York City's ban on flavored other tobacco products (OTP), such as cigars, chew, snus,²⁶ and the province-wide menthol cigarette sales bans in Nova Scotia and Alberta, Canada.²⁷ However, compliance would likely be more variable in a partial versus comprehensive ban setting where the local

supply of menthol cigarettes is not disrupted.

Compliance may also be influenced by store type and neighborhood-level factors. National and international studies suggest that smaller, independent convenience stores and gas stations were less likely to comply with local ordinances compared to larger, chain stores,²⁸⁻³⁰ and stores located near public high schools or in neighborhoods with a higher proportion of low-income, youth, and African American residents were less likely to comply with efforts to regulate underage tobacco sales and restrictions against loose cigarette sales.^{24,30} The presence of menthol cigarette replacement packs developed by the tobacco industry adds an additional layer of complexity to understanding compliance. In Canada, Brown et al. found that stores were overwhelmingly compliant with a provincial ban on menthol cigarette sales.²⁷ However, the authors also observed cigarette packs labeled as menthol prior to the ban were rebranded as menthol cigarette replacement packs post-ban, using descriptors such as ‘green’ or ‘smooth taste [redesigned] without menthol’ to communicate to consumers that they could substitute menthol cigarettes with these new packs.²⁷ While replacement packs follow the letter of the law, their sale could create the impression that menthol cigarettes are still available, potentially undermining the public health benefit of such bans.²⁷

The literature suggests that stores are largely compliant with comprehensive flavored tobacco bans; however, no research has investigated compliance with a partial ban on the sale of menthol cigarettes, including how compliance may vary across store type. The current study addresses these gaps by assessing compliance with Chicago’s menthol cigarette ban among a sample of stores within 500 feet of a high school. Additionally, we build on Brown et al.’s study to explore whether retailers sell menthol

cigarette replacement packs in a partial ban setting. Although Chicago's ordinance restricts the sale of all flavored tobacco products, we focused our compliance assessment only on whether stores sold menthol cigarettes given the reported burden of menthol cigarette use and interest in efforts to regulate their sale. As more local jurisdictions develop and implement menthol cigarette bans, results from this study can inform stakeholders about the extent of retailer compliance, including which store types or neighborhood locations may need increased enforcement efforts.

METHODS

Study Setting and Sample

The Chicago Department of Public Health (CDPH) provided the list of all 154 tobacco retailers within 500 feet of a high school, updated in April 2017. We selected a stratified random sample of 100 stores from this list to assess compliance. Each store was geocoded and assigned to one of Chicago's 77 community areas, a geographic region used in city planning efforts that encompasses multiple neighborhoods. Each community area was assigned a Hardship Index score using publicly available data from the CDPH Epidemiology and Public Health Informatics team based on US Census American Community Survey (ACS) 5-year estimates (2008-2012). Hardship Index score ranged from 1-100, where a higher score reflects worse economic conditions. The score was derived from six equally weighted indicators: crowded housing, poverty, income, education, unemployment, and proportion of residents under 18 or over 64 in a community area.³¹ We categorized Hardship Index score as follows: Low (score 1-33), Medium (score 34-66), and High (score ≥ 67). We then selected our sample through

stratified random sampling proportional to the number of stores located within each category.

The final sample was 90 tobacco retailers. Five stores were permanently closed and no audit data were collected. An additional five stores did not sell tobacco products at the time of data collection. A follow-up call to the manager/owner established that the store never sold tobacco (n=3) or stopped prior to the ban's implementation (n=2). Data collection took place in June 2017. A Johns Hopkins University Bloomberg School of Public Health Institutional Review Board reviewed this study and determined it to be non-human subjects research.

Procedures

We developed an assessment protocol and variable glossary based on previous studies.^{32,33} We captured information on store type, presence of menthol cigarette advertising, presence of menthol cigarette replacement packs, and whether menthol cigarettes were sold to the research team. Data were collected covertly on a smart phone using the data collection application, doForms. A single team of two trained researchers visited all 90 stores.

Measures

Outcomes

The main outcome for this study was compliance determined by whether menthol cigarettes were sold in affected stores (yes/no). We did not assess compliance with the sale of other flavored tobacco products, including menthol flavored OTPs. If a store did not sell the research team a pack of menthol cigarettes, then it was marked compliant. We ascertained compliance by asking the clerk for a pack of Newport menthol cigarettes, the

most popular menthol cigarette brand sold in the US and widely available in Chicago.^{34,35}

If unavailable, we asked for another menthol cigarette brand. As a final step, we checked all non-compliant stores against the enforcement agency's list of stores in the appeals process. Storeowners are allowed to formally contest whether their store is subject to the ban (e.g. distance between store and school believed to be greater than 500 feet) and may sell flavored tobacco products while their appeal is processed.¹⁷ We found two stores that sold menthol cigarettes were in the appeals process at the time of data collection. These stores were marked as compliant in the final analysis.

We also assessed whether any menthol cigarette replacement packs were present through visual observation of the cigarettes for sale. In addition, the data collection team asked the clerk whether there was anything like menthol cigarettes for sale if they were told menthol cigarettes were not available (e.g. "Do you have anything like a pack of menthol cigarettes for sale?"). Given the exploratory nature of this part of the study, we had a wide-ranging concept of what a menthol cigarette replacement pack could be and instructed the data collection team to purchase any cigarette pack they suspected was marketed as a substitute for menthol cigarettes. This included cigarette packs that were labeled "Green" rather than "Menthol" or packs that stated they were redesigned without menthol.

Menthol Advertising

We assessed the presence of menthol cigarette advertising – defined as any sign/poster, price promotion, or branded functional ad (e.g. counter mat) – on the interior (yes/no) and exterior of the store (yes/no).³³

Other Independent Variables

Store type was based on the following categories: independent convenience store, gas station, chain convenience store, grocery store, liquor store, pharmacy, dollar discount store, and other, which included restaurants and a tobacco accessory store. In this sample, all gas stations were affiliated with a corporate chain.

School-level variables included high school type (public vs. private) and distance between the store and a high school, which was dichotomized to reflect stores ≤ 250 feet versus those 251-500 feet away. These data were provided by the CDPH, and distance was measured as the shortest distance between the property line of the high school to the property line of the store. If two high schools were present ($n=5$), the distance and type of the closest high school was included in the analysis.

We used ArcGIS Online to link stores to neighborhood-level variables, derived from US Census ACS 5-year estimates (2011-2015). We defined neighborhood as the census tract. Neighborhood characteristics included proportion of residents living under the poverty level, percentage of residents < 18 years old, and proportion of non-Latino White, non-Latino African American, and Latino residents (categorized for descriptive analysis but included as continuous variables otherwise). We accounted for total number of tobacco retail stores in the census tract (< 4 stores, ≥ 4 stores). We also accounted for regional variation by including the location of the store in relation to the city center (Central, North, West, and South). Chicago is highly segregated by race and income.^{36,37} The North and Central regions of the city are generally more affluent and contain census tracts with a greater proportion of non-Latino White residents, while, the West and South

sides are generally less affluent and contain census tracts with a greater proportion of Latino and non-Latino African American residents.³⁷

Statistical Analyses

All bivariate and regression analyses took into account the sampling design: each store was assigned a design weight to reflect the inverse probability of selection from within one of the three Hardship Index strata (Low, Medium, High). We used Pearson χ^2 to describe associations between compliance and menthol advertising, store type, school and neighborhood-level factors, and geographic region. Using logistic regression models, we first looked at the independent effect of each independent variable on odds of ban compliance (Crude). Models were subsequently adjusted for store type and school-level variables (Model 1) and then further adjusted for neighborhood-level characteristics (Model 2). In these models, chain convenience stores, grocery stores, liquor stores, pharmacies, dollar discount stores, and other stores were combined into the category “Larger or Chain Store.” We took the initial point estimate for a demographic characteristic (e.g. 15% Latino residents) and divided by 10 to create a scaled variable. Thus, each 1-unit change in the variable reflects a 10% increase in the characteristic.²⁴ Due to high correlation with other census tract variables and multicollinearity, we did not include proportion of non-Latino White residents or geographic region in the regression models. Tests of associations were two-tailed (alpha = 0.05). All analyses were conducted using Stata (version 14.2).

RESULTS

Compliance with Menthol Cigarette Ban

Overall, 57% (n=53) of stores in this study were compliant with Chicago's menthol cigarette ban (weighted prevalence, **Table 4.1.**). In this sample, the majority of stores were independent convenience stores (25%) or gas stations (35%). Approximately 7.5% of stores were located in the city center, while the remaining stores were distributed throughout the North (29%), West (29%), and South (35%) sides. In the bivariate analysis, compliance did not vary significantly by store type ($p=0.13$), although a greater proportion of non-compliant stores were gas stations (**Table 4.1.**). All pharmacies assessed were owned by the same company and all were compliant. In contrast, grocery stores and dollar stores owned by the same company were not consistently compliant. Compliance did not vary significantly by distance to a high school, high school type, neighborhood characteristics or geographic location in the bivariate analysis.

In terms of advertising, 29% of stores had interior advertisement for menthol cigarettes and 11% had exterior advertisement. Price promotions were the most common type of exterior and interior advertisement, and a higher proportion of stores with any menthol cigarette advertisements were gas stations (*data not shown*). Compliance varied significantly by presence of exterior ($p=0.01$) and interior menthol cigarette advertising ($p<0.001$). Around half of non-compliant stores had interior menthol cigarette advertisements; the majority of these ads were industry-provided price promotions or signs (*data not shown*). There were also eight compliant stores that displayed signs/posters for menthol cigarettes (*data not shown*).

Table 4.1. Store-level and neighborhood characteristics for selected stores affected by Chicago’s partial menthol cigarette ban, overall and by ban compliance

	N	Total Analytic n=90 Weighted %	Compliant with Ban n=53 Weighted %	Not Compliant n=37 Weighted %	p Value
Store Type					
Independent Convenience Store	23	24.5	22.6	26.9	0.13
Gas Station	30	34.8	24.4	48.7	
Chain Convenience Store	5	5.1	6.6	3.2	
Grocery Store	9	10.7	10.3	11.1	
Liquor Store	7	8.4	12.4	3.1	
Pharmacy	6	6.2	10.9	0.0	
Dollar Discount Store	6	6.4	7.5	4.8	
Other	4	3.9	5.3	2.2	
Interior Menthol Cigarette Ads					
No	65	71.0	86.1	50.9	< 0.001
Yes	25	29.0	13.9	49.1	
Exterior Menthol Cigarette Ads					
No	81	89.3	96.4	79.9	0.01
Yes	9	10.7	3.6	20.1	
Distance to Nearest High School					
≤ 250 feet	34	36.6	41.0	30.8	0.34
251-500 feet	56	63.4	59.0	69.2	
Type of High School					
Private	26	29.3	29.8	28.6	0.90
Public	64	70.7	70.2	71.4	
Tobacco Retail Outlets in Neighborhood					
< 4 stores	38	43.4	48.6	36.5	0.28
≥ 4 stores	52	56.6	51.4	63.5	
Neighborhood Characteristics (Census Tract)					
<i>% Non-Latino White residents</i>					
< 25%	50	59.0	51.5	68.9	0.24
25% - 60%	27	28.8	33.7	22.4	

> 60%	13	12.2	14.8	8.7	
% <i>Non-Latino African American residents</i>					
< 25%	51	54.1	59.5	46.9	0.08
25% - 60%	7	7.5	11.2	2.6	
> 60%	32	38.4	29.3	50.5	
% <i>Latino residents</i>					
< 25%	55	60.0	60.5	59.3	0.97
25% - 60%	18	19.5	18.5	20.8	
> 60%	17	20.5	21.0	19.9	
% <i>< 18 years old</i>					
< 15%	23	22.8	29.4	14.1	0.24
15-30%	51	58.7	52.8	66.5	
> 30%	16	18.5	17.8	19.4	
% <i>Living Below Poverty Line</i>					
< 15%	23	23.8	28.8	17.2	0.43
15-30%	36	40.9	39.8	42.3	
> 30%	31	35.3	31.4	40.5	
Geographic Region					
Central	8	7.5	11.5	2.2	0.29
North	26	28.5	31.2	25.0	
West	28	29.2	27.2	31.8	
South	28	34.8	30.1	41.0	

Weighted %= Proportion of the sample weighted to account for stratified sampling design.

Bolded text indicates statistical significance (p<0.05).

Table 4.2. presents results of the unadjusted and adjusted logistic regression. In the unadjusted model, gas stations had 77% lower odds of compliance compared to larger or chain stores (OR=0.23, 95% Confidence Interval (95%CI): 0.08-0.68, Crude). Distance to a high school, high school type, and neighborhood characteristics were not significantly associated with compliance in the unadjusted analysis. When controlling for school-level characteristics (Model 1), gas stations remained less likely to comply with the ban. In the full model controlling for store, school, and neighborhood-level characteristics (Model 2), gas stations had 81% lower odds of compliance compared to larger stores (OR=0.19, 95%CI: 0.06-0.58) and the odds ratio for compliance among independent convenience stores approached significance (OR=0.27, 95%CI: 0.07-1.01). Distance to a high school, high school type and neighborhood characteristics were not associated with compliance in the adjusted models.

Presence of Menthol Cigarette Replacement Packs

No menthol cigarette replacement packs were observed.

DISCUSSION

To the best of our knowledge, this study is the first assessment of compliance with a partial menthol cigarette ban in a US city. Around half of affected stores (57%) did not sell menthol cigarettes. Compared to the evaluation of Canada's province-wide menthol cigarette bans, which found very high levels of compliance,²⁷ our study demonstrates a lower level of compliance with this partial ban in one city. This finding is similar to studies in New Zealand and Canada that found compliance with partial point of sale display bans was lower compared to more comprehensive efforts.^{28,38}

Table 4.2. Odds Ratio (95% Confidence interval) for compliance with Chicago's partial menthol cigarette ban by store and neighborhood characteristics (n=90)

	Crude OR	CI	Model 1 OR	CI	Model 2 OR	CI
Store Type						
Larger or chain store [^]	Ref.		Ref.		Ref.	
Independent convenience store	0.39	(0.12-1.23)	0.37	(0.11-1.18)	0.27	(0.07-1.01)
Gas station	0.23	(0.08-0.68)**	0.21	(0.07-0.63)**	0.19	(0.06-0.58)**
Distance to Nearest High School						
≤ 250 feet	Ref.		Ref.		Ref.	
251-500 feet	0.64	(0.26-1.60)	0.54	(0.20-1.42)	0.57	(0.20-1.68)
Type of High School						
Private	Ref.		Ref.		Ref.	
Public	0.94	(0.36-2.46)	0.80	(0.29-2.26)	0.99	(0.34-2.96)
Tobacco Retail Outlets in Neighborhood						
< 4 stores	Ref.				Ref.	
≥ 4 stores	0.61	(0.25-1.50)			0.43	(0.16-1.19)
Neighborhood Characteristics, per 10% increase						
% Non-Latino African American residents	0.92	(0.82-1.03)			0.86	(0.64-1.15)
% Latino residents	1.01	(0.87-1.16)			0.92	(0.66-1.27)
% Residents < 18 years old	0.59	(0.34-1.02)			0.69	(0.27-1.73)
% Residents living below poverty line	0.82	(0.60-1.13)			1.09	(0.65-1.81)

OR = odds ratio; CI = 95% Confidence Interval; Ref. = reference group

[^] Defined as chain convenience store, grocery store, pharmacy, liquor store, dollar discount store, and other (e.g. restaurant, tobacco accessories store)

Crude = unadjusted analysis

Model 1 = adjusted for store type and school-level factors

Model 2 = further adjusted for neighborhood-level factors

**p < 0.01

In this study, we did not find any menthol cigarette replacement packs as was previously observed in stores affected by Alberta, Canada's comprehensive menthol cigarette ban.²⁷ This is likely because menthol cigarettes are still available to consumers due to the partial nature of Chicago's ban, leaving little incentive for the tobacco industry to market replacement packs in Chicago. Packs of menthol cigarettes were also still being sold in many stores affected by the ordinance. If menthol cigarette replacement packs were being sold under the conditions of Chicago's partial ban, this could have signified that tobacco companies were developing replacement packs in anticipation of other local and potential national efforts to restrict menthol cigarettes sales. Tobacco companies may be waiting for more cities to implement comprehensive bans before introducing replacement packs into the US marketplace. Future observational studies are warranted to track this response and its potential to undermine the public health benefit of such bans.

Overall, results of this compliance evaluation can inform ongoing or future efforts to develop and implement menthol cigarette bans, including partial bans. In our analysis, we observed that gas stations were significantly less likely to comply with the partial menthol cigarette ban. Local jurisdictions could maximize enforcement efforts by focusing on gas stations first to achieve a higher rate of compliance with a partial or comprehensive ban. In this sample, all gas stations were affiliated with a regional or national chain and other cities are likely to have a similarly high proportion of corporate gas stations. It is possible that these stores could be incentivized to follow the law in an effort to protect their parent company's image.²⁸ Efforts could operate on multiple levels, including outreach to the parent company and individual franchise storeowners.

Our results, in combination with other studies conducted in New Zealand and the US, suggest that corporate chain stores are generally compliant with tobacco ordinances.^{28,29} However, we did observe some variation in compliance across grocery and dollar discount stores within the same chain. To increase compliance in chain stores, enforcement agencies could prioritize sharing materials and trainings through corporate communication channels to improve awareness and knowledge of a ban among staff in chain stores.

Not surprisingly, industry-provided signs and price promotions were commonly observed in non-compliant stores, especially gas stations. What was more unexpected was that we also observed menthol cigarette signs in eight compliant stores. These results indicate sustained exposure to both the product and promotions in areas where menthol cigarette sales are banned. This may be intentional in the case of price promotions in non-compliant stores or reflect infrequent changes made to exterior or interior signage. Because advertising and product access are associated with smoking susceptibility and difficulty quitting,³⁹ ordinances that restrict both may be more likely to achieve the public health goal of reducing initiation with and continued use of menthol cigarettes. It is unlikely that removing menthol cigarette advertising in stores where the sale of menthol cigarettes is restricted would violate commercial speech protections under the First Amendment, as commercial speech “is not protected if it proposes an unlawful transaction.”⁴⁰

Finally, we did not find significant variation in compliance by distance to a high school or high school type. We also did not observe variation in compliance across neighborhood demographic characteristics. These results are encouraging and suggest

that compliance in a partial ban setting is just as high in areas where menthol cigarettes are more likely to be sold and marketed in the US.^{12,13} However, there may be variation in why some stores comply and others do not, related to neighborhood location, that this analysis does not fully capture.

Limitations

There are several limitations to this research. First, it is possible that we overestimated compliance if stores that sold menthol cigarettes through covert means did not sell to our data collection team. One data collector identified as a Latino man in his early 20s (C1); the other identified as a White woman in her early 30s (C2). At each store, C1 captured the assessment data, while C2 asked for the pack of menthol cigarettes and interacted with the clerk as a customer. Directly purchasing packs and using the same data collection team to complete all assessments improves the validity and consistency of our compliance measure, however it may not capture all stores that only sell menthol cigarettes to known regulars. Additionally, the study results may not be fully generalizable to other cities, but findings are likely relevant for other medium to large cities with a high proportion of non-White populations that enact a partial menthol cigarette ban. Further, findings can generally inform other urban jurisdictions as they develop draft ordinance language and enforcement plans.

CONCLUSION

Our study results suggest that compliance is poor with a partial menthol ban. A comprehensive ban would be the most ideal policy option to reduce access to menthol cigarettes. However, the potential political challenges associated with passing and implementing such an ordinance, like the tobacco-industry sponsored campaign against

San Francisco's comprehensive flavored tobacco ban, which includes menthol cigarettes,²³ may make a partial menthol cigarette ban the most feasible policy solution for some jurisdictions. In our study, we observed that approximately half of the stores assessed complied with the ban. This finding indicates that some stores do follow a partial ban, although this rate is lower than the results from other comprehensive menthol cigarette and flavored tobacco ban evaluations.²⁴⁻²⁷ Surprisingly, compliance did not vary significantly across neighborhood demographic characteristics, suggesting that partial bans are not less effective in reducing access to menthol cigarettes in low-income, non-White neighborhoods disproportionately exposed to menthol cigarette advertising and sales. Our results also suggest that including a restriction on both menthol cigarette advertising and product sales could strengthen partial and comprehensive bans by reducing dual exposure to product and promotion. As more jurisdictions develop partial or comprehensive menthol cigarette bans, the results of this study demonstrate opportunities to address anticipated challenges in compliance across store types through targeted communication and enforcement efforts, particularly in gas stations.

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CHAPTER 5: MANUSCRIPT #2

Beyond Compliance: Exploring How Retailers Navigate the Implementation of Chicago's Menthol Cigarette Ban

ABSTRACT

Structural interventions that restrict tobacco sales in retail stores are a common public health approach to reduce tobacco use. Limited attention has been given to exploring how retailers manage the implementation of such bans beyond investigating compliance. In February 2017, Chicago banned the sale of menthol cigarettes and other flavored tobacco products within 500 feet of high schools. This study explores how retailers navigate ban implementation and draws on qualitative interviews with retailers in 31 affected stores. Results suggest that profit losses are a concern among retailers in smaller convenience stores and gas stations and partial tobacco sales bans may pose additional financial strain, which retailers manage by changing products offered, appealing whether the ban applied to an individual store (e.g. store believed to be greater than 500 feet from high school), or not complying with the ban on menthol cigarette sales. Further, the threat of fines frequently motivated decisions to comply with the ban and other city rules, but retailers often viewed enforcement visits as invasive or a mechanism to generate revenue for the city. Finally, retailers saw local government agencies as their main source of information but felt that communication about the ban and the existing guidelines regarding what was a flavored tobacco product were one-sided and ambiguous. In contrast, retailers generally viewed tobacco company representatives as allies who supported stores in their efforts to manage ban implementation. These findings reflect the complex environment within which retailers navigate the implementation process. Building active and more positive relationships between local government agencies and retailers that take into account these complexities could offer the needed support for implementation and promote retailers' investment in advocating for and upholding tobacco control efforts in stores.

INTRODUCTION

In tobacco control, restrictions on the sale of tobacco products in retail stores is a common structural intervention approach to change the environment in which tobacco products are sold and reduce tobacco use.¹⁻⁴ In 2009, the federal Family Smoking Prevention and Tobacco Control Act (FSPTCA) banned the sale of cigarettes with a characterizing flavor across retail environments in the United States, but this legislation excluded menthol as a characterizing flavor.⁵ Menthol cigarettes are associated with greater odds of youth initiation and decreased rates of cessation, particularly among African American and Latino smokers.⁶⁻⁹ Exposure to menthol cigarette sales and marketing is also disproportionately higher in African American and Latino communities and low-income communities across the United States.¹⁰⁻¹² Although no action has been taken at the national level to ban menthol cigarettes, the FSPTCA grants states and localities the authority to adopt policies to restrict product sales in the retail environment.^{5,13}

Recently, several cities – including Minneapolis, Minnesota, Oakland, California, and Chicago, Illinois – have banned the sale of menthol cigarettes in retail stores, reflecting a growing movement to address menthol cigarette use through local sales bans.¹⁴⁻¹⁶ Like Minneapolis and Oakland, Chicago's ban includes menthol cigarettes as part of a larger flavored tobacco ban.¹⁴⁻¹⁶ However, unlike these comprehensive efforts, Chicago's ban is partial in that it only affects retail stores within 500 feet of high schools.¹⁶ Initially, the ban applied to all retail stores within 500 feet of all elementary, middle, and high schools.^{16,17} However, in December 2016 the Chicago City Council

voted to restrict the ban to only those stores within 500 feet of high schools, effective February 2017, partly due to political pressure from an Illinois retailer association.^{16,18}

In tobacco control, the success of structural interventions such as a menthol cigarette ban is frequently measured by whether retailers comply.¹⁹⁻²¹ However, there is growing interest to expand beyond this outcome measure and investigate retailers' experiences and how they manage rules regulating tobacco sales in their stores.²²⁻²⁶ As a target group for tobacco control regulations, the outcome of compliance with a product sales ban is highly dependent on retailers, who represent the smallest unit of change in the implementation process.²⁷ Policy implementation frameworks suggest that the level of pressure from the enforcement agency and degree of clarity in policy guidelines can influence how retailers adapt to and manage regulations that affect business in their store.^{27,28} Further, competing priorities, such as maintaining profits or pressure from other actors, such as tobacco company representatives, could gain influence over the implementation process and potentially reduce compliance.^{27,28}

Previous studies evaluating tobacco control bans and other regulatory efforts in retail stores found that fear of profit loss was a source of resistance to policy change and a barrier to compliance. Convenience stores in particular heavily depend on revenue from tobacco sales and other purchases made by tobacco customers, as well as money from contracts or paid deals with tobacco companies to sell and promote specific products.^{22,25,29-32} Larger stores, such as grocery stores are less dependent on tobacco sales and therefore more likely to support or comply with tobacco control regulatory efforts.^{24,29,33-35} Further, retailers may oppose partial regulations that selectively restrict

the sale of tobacco in certain stores, arguing that such restrictions are unfair and victimize owners in terms of their ability to generate profits through tobacco sales.^{31,32}

At the same time, a strong government enforcement strategy can encourage stores and venues to support and self-enforce bans or clean indoor air policies.³⁶⁻³⁸ Government agencies, as well as corporate offices overseeing corporate-owned or franchised-owned chain stores, can facilitate compliance with bans and other regulatory efforts by providing education, training, and – in the case of corporate offices – oversight of implementation.^{35,36} However, infrequent or absent enforcement mechanisms can decrease compliance with and awareness of regulations.^{24,39} Limited communication from government about the requirements of an ordinance can also serve as a barrier to compliance.^{24,40} In fact, several studies suggest that retailers were more likely to identify tobacco representatives rather than government agencies as a main source of information about new policies affecting tobacco sales.^{22,29} The tobacco industry has a history of providing inaccurate information about the impact of regulations and their potential to contribute to profit loss, which could potentially undermine support for policy implementation among retailers and contribute to non-compliance.^{23,26,30,31}

The current study uses the policy implementation framework approach to explore how enforcement agency pressure, clarity in policy guidelines, and competing priorities – such as profit loss and pressure from other actors – influence how retailers in Chicago respond to the partial ban on menthol cigarette sales and other flavored tobacco products in their stores. Specifically, the current study describes how retailers navigate experiences with: (1) perceived profit loss due to the ban; (2) enforcement agency power; and (3) communication and control over the implementation process by government,

corporate, and tobacco industry representatives. Previous research suggests that differences in implementation experience may occur across store types particularly in chain or franchise owned stores with a corporate office presence or in smaller convenience stores more heavily dependent on tobacco revenue and subsequently more fearful of profit loss due to a new regulation on tobacco sales.^{24,29,35} It is also possible that fear of profit loss due to any new tobacco control regulatory effort may be different in stores located in non-White or low income neighborhoods, where menthol cigarettes are more likely to be sold.¹⁰⁻¹² Therefore, this study also explores how results vary across the dimensions of store type, neighborhood racial/ethnic composition and proportion of residents living in poverty. Further, the present study identifies key differences across retailer experience based on whether a store is compliant or non-compliant with the ban on menthol cigarettes sales to highlight how profit loss, strength of enforcement, and external communication and control over the implementation process may play a role in one policy outcome of compliance. Using Chicago as the study site, this is one of the first known studies to qualitatively explore how retailers respond to the implementation of a partial ban on flavored tobacco that also includes menthol cigarettes. Results can inform ongoing or future efforts to develop communication and enforcement strategies to implement menthol cigarette bans and generally offer insight into how retailers navigate competing demands and interests and adapt their behavior in response to a new tobacco sales regulation.

METHODS

Semi-structured interviews were conducted by a single investigator (LC) in retail stores across the City of Chicago. Interviews took place between August 14, 2017 and

September 15, 2017. All interviews occurred inside a retail store, either at or near the counter or in the store office. Interviews were conducted with the storeowner or manager, and, if unavailable, with the store clerk. Each store was assigned a unique numeric identifier (e.g. store #13). The Johns Hopkins Bloomberg School of Public Health Institutional Review Board reviewed the research and designated it non-human subjects research.

Eligibility and Sampling Approach

A list of all 154 retail stores affected by the ban was obtained from the Chicago Department of Public Health (CDPH). In a previous study, 100 stores were randomly selected from this list to conduct in-store audits of compliance with the menthol cigarette ban.⁴¹ These 100 stores were excluded from the current study's sampling frame because the same data collector that conducted the interviews for this study also visited all 100 stores to complete the compliance assessment. In the compliance assessment, data were collected covertly, meaning the data collectors did not announce their presence or the purpose of the study. Due to ethical considerations, the data collector did not revisit these 100 stores in an effort to protect the sensitive information on compliance that was collected. Further, excluding these 100 stores likely reduced any complications related to a retailer recognizing the data collector or questioning the motivation for the previous visit to the store. This sampling frame design also promoted the ability for the investigator to have an open and transparent rapport with the participant, without requiring a disclosure that the store had already been included in the assessment study.

From the remaining 54 stores, retailers were actively recruited to participate in interviews. Fifty-one of the 54 stores were contacted. Two stores were not included

because they were exclusively bar-restaurants only open during the evening; the perspective of these establishments was not considered as relevant to the study as other more conventional tobacco vendors. The third store – a chain convenience store located near a similar chain convenience store that was already interviewed – was not contacted because this perspective was already adequately represented. To be eligible to participate, retailers had to be 18 years of age or older, speak English, and work in or own a store that sold tobacco products prior to the ban implementation date. Stores were approached up to five times to participate. Of the 51 stores contacted, 13 stores approached refused to participate, three stores were permanently closed, three stores were excluded because they never sold tobacco products, and one store was excluded because the clerk only spoke Spanish. A total of 35 retailers in 31 stores across the City of Chicago were interviewed for this study. Retailers included 15 managers, 13 owners, and seven clerks. In four stores, two individuals who worked in the store participated in the interview. In two stores, two managers participated; in one store, two clerks participated; and in one store one manager and one clerk participated. All participants were provided a \$25 gift card to compensate for their time. When two retailers participated in the same interview, each retailer was offered a gift card.

Participating Store Characteristics

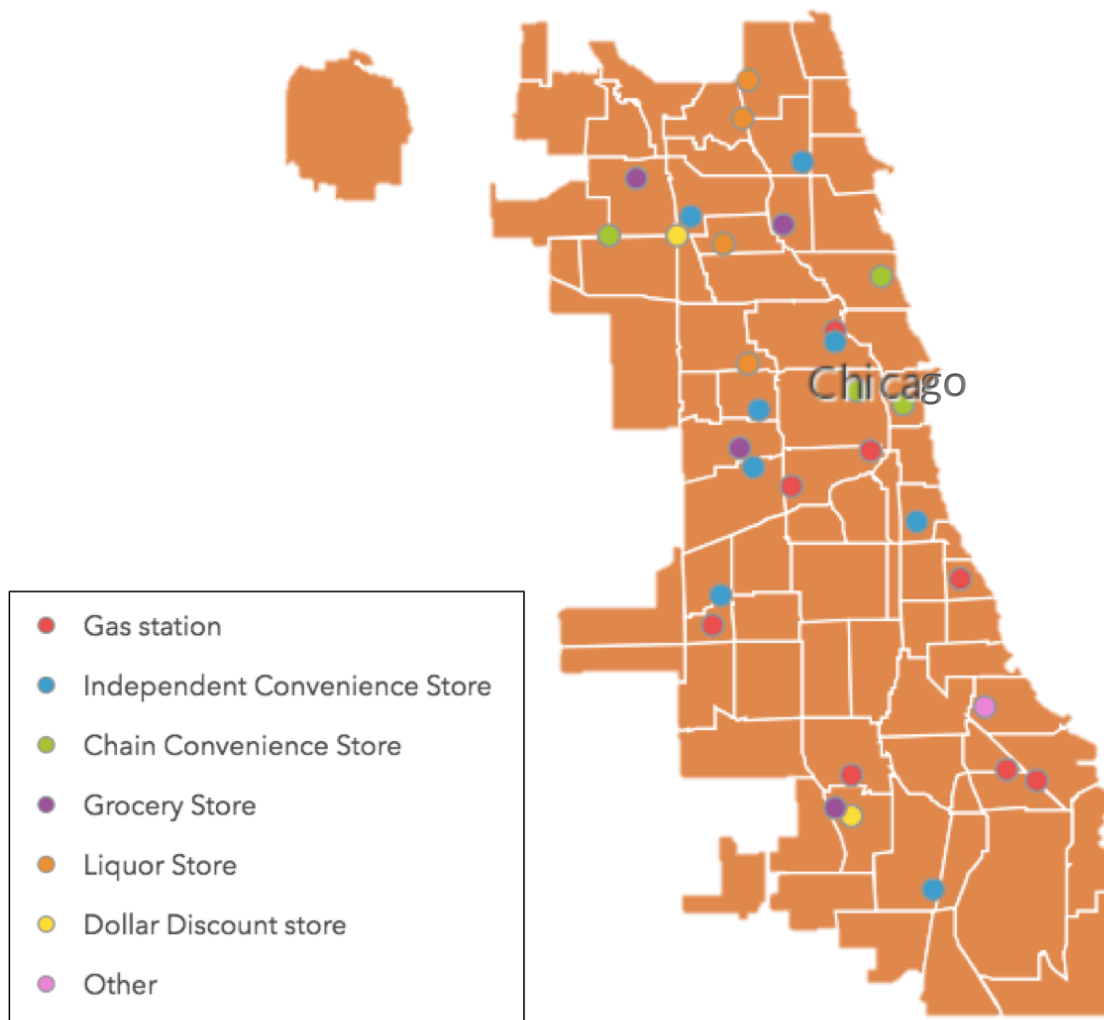
The main unit of analysis for this study was the 31 retail stores. In the four cases where two retailers participated in the interview, the information collected from both retailers was analyzed together to reflect the viewpoint of a single store. Overall, half of the interviews either took place in independent convenience stores (n=8) or gas stations (n=8, *one corporate-owned chain store, seven franchise-owned chain stores*). The

remaining interviews were conducted in franchise-owned chain convenience stores (n=4), liquor stores (n=4), grocery stores (n=4, *two corporate-owned chain stores, two independent stores*), dollar discount stores (n=2, *one corporate-owned chain store, one independent store*), and one “Other” store – a mass merchandiser with a convenience store located within a complex of one furniture and electronics store and two cell phone stores. The location of the 31 stores by store type is displayed in **Figure 5.1**. Store neighborhood was defined as the census tract in which the store was located based on the United States 2010 Census. Estimates of the racial composition of residents and proportion of residents living under the poverty level were based on U.S. Census American Community Survey (ACS) 5-year estimates (2011-2015). Overall, 25 stores were located in neighborhoods where more than 60% of the residents in the store’s census tract identified as Non-Hispanic Black/African American (n=12), Non-Hispanic White (n=6), and Hispanic/Latino (n=7). The majority of stores were located in neighborhoods where 15-30% of residents lived below the poverty line (n=20). The remaining stores were located in areas where less than 15% (n=7) or more than 30% (n=4) of residents lived below the poverty line.

Data Collection

In each store, the sale of menthol cigarettes was documented to determine compliance with the ban. The current study defined compliance based on whether a store sold menthol cigarettes given the reported burden of menthol cigarette use and interest in efforts to regulate their sale. However, it should be noted that retailers also discussed the sale of other flavored tobacco products as a part of the ban implementation experience.

Figure 5.1. Map of the stores included in the study by store type across the City of Chicago (n=31)



Separate interview guides were used for compliant and non-compliant stores, however, both guides covered similar topics. Topics included changes or anticipated changes in profits and products sold due to the ban; communication with city government, tobacco company, and corporate office representatives (*for corporate or franchise-owned chain stores only*); experience with enforcement of the ban or other city rules in the store, and overall opinion of the ban. Interviews were semi-structured – all participants were asked about the same topics, however additional questions were introduced to follow-up on emerging ideas or leads in the conversation.

In total, 28 of the 31 store interviews were considered full interviews and covered the main concepts of the interview guide. These interviews lasted an average of 18 minutes. Three interviews were considerably shorter (less than 5 minutes) and the full content of the interview guide was not discussed. This was due to time constraints faced by participants, who were all managers of corporate-owned (n=2) or independent (n=1) grocery stores that did not sell menthol cigarettes. These participants provided some information on ban implementation, particularly related to perceived profit loss and changes to products sold in the store. However, they were not able to participate in a longer interview due to their responsibilities managing the activities on the store floor and no other retailer in the store was available to continue the interview.

Following every interview, a detailed summary was written which captured a description of the participant and the setting, summarized the key topics discussed, and identified any emerging themes. When possible, handwritten notes were also taken during the interview to assist in drafting summaries and voice memo recordings. Thirteen of the 31 interviews were not audio-recorded. When a participant declined to be audio-

recorded, a voice memo was recorded immediately following the interview to summarize the topics discussed and information provided by the respondent to capture the “remembered scene” as quickly as possible.⁴²

Data Analysis

All recorded interviews or voice memos were transcribed verbatim by a professional transcription service (TranscriptWing). Transcripts were double-checked for accuracy. The same investigator (LC) conducted each interview and coded the transcripts for analysis. This ensured continuity of the research instrument by cohesively integrating the same conceptual perspective throughout the study and preserving the depth of analysis from design decisions made in the field to the interpretation of data.^{43,44}

The coding and analysis had multiple steps and followed Yin’s protocol for compiling, disassembling, and then reassembling the data for interpretation.⁴⁵ To start, transcripts and memos were compiled into the qualitative data management software MaxQDA (Version 12). Documents were coded by store type, whether the store was compliant with the ban (i.e. sold menthol cigarettes), and the characteristics of the store neighborhood (i.e. racial/ethnic composition, proportion of residents living in poverty). All documents were initially read first for familiarity, and then a second reading took place where concepts that emerged were noted to inform future codebook development. In the next step, the disassembling process, the transcripts were read once again and more detailed analytic memos were drafted on emerging codes. During this process, the codebook was developed and similar codes were collapsed together to develop a draft codebook that had the definition of each code, guidelines for how to use the code, and examples from the data. An iterative process was used in which the codebook was

applied to the transcripts and codes were revised or added until a final version was developed. The codebook was “finalized” once salient concepts related to the study aim were sufficiently captured and no new topics emerged as the final codebook was applied to subsequent transcripts.⁴⁵ Codes included key analytical topics such as profit loss, strategies used to mitigate profit loss, sources of information about the ban, and experience with enforcement agency visits in the store. Once finalized, the coding scheme was systematically applied to all transcripts. In the final step of the analysis, the coded transcripts were reviewed and higher-level themes were identified by comparing the meaning of codes across transcripts. Through this process, patterns in the data were identified, including similarities and differences in these patterns across store type, compliance with the ban on menthol cigarettes sales, and neighborhood characteristics.

Findings are presented through summaries and exemplary quotations. Quotes were edited for clarity. Speakers are identified by unique store number and store type. Overall, findings were more likely to vary by store type than neighborhood characteristics or whether a store was compliant. However, some key differences did emerge by whether a store was non-compliant with the ban and sold menthol cigarettes. These differences are noted in the results where appropriate.

RESULTS

Three themes were identified: perceived profit loss and strategies for loss management; enforcement agency power over fines and licenses; and perception of government, corporate, and tobacco industry representatives as sources of communication and control in the implementation process.

Perceived Profit Loss

Retailers across the sample discussed that the direct profit or money made from selling cigarettes was generally small; however, the importance of cigarette sales to the overall profitability of the store varied by store type. In convenience stores and gas stations, retailers discussed that cigarettes were integral to profits because customers who purchased cigarettes would also purchase other items in their “basket” (e.g., chips, candy, drinks). From the retailers’ perspective, these extra “basket” items were seen as a major source of profit for the store. In contrast, retailers in most liquor stores viewed cigarettes as a service item offered so that customers who wanted to purchase both alcohol and cigarettes in the same place could do so at their convenience. Among grocery stores, retailers conveyed that cigarettes were a marginal item offered from within the wide range of products for sale at the store and subsequently not a crucial source of profit. Regardless of store type, many retailers discussed how important menthol cigarettes were among the cigarettes and tobacco products they sold, often characterizing them as the “biggest seller” or that “everybody” bought them.

In general, retailers discussed perceived profit loss in terms of direct and indirect losses, as well as money lost from monthly tobacco company contracts to sell and promote menthol cigarettes. Store type was particularly relevant to how retailers discussed changes to profits, including fear of profit loss for stores still selling menthol cigarettes, and how retailers described managing perceived losses. Overall, retailers within grocery stores and liquor stores believed profit loss due to the ban was minimal in their stores. In both independent and corporate-owned grocery stores, retailers expressed that the volume of customers remained the same and that any perceived profit loss due to the ban was considered relatively small. Several liquor store managers felt that they lost

some customers who liked to purchase cigarettes alone or with alcohol products at the store. However, most liquor storeowners and managers also believed that any perceived profit losses due to the ban were nominal.

Compared to retailers in grocery and liquor stores, retailers in independent and chain convenience stores, some gas stations, and the independent dollar discount store expressed severe perceived profit losses due to the ban. Collectively, these retailers discussed what they believed to be the loss of the stores' "one-stop shop" appeal. Retailers believed that both regular and new customers who wanted to purchase menthol cigarettes no longer purchased these items and the other "basket" items at their stores. For example, one independent convenience store owner complained that he lost 25% of his business due to the ban because he believed that his former customers were not returning to his store due to the fact that he no longer sold menthol cigarettes. Like this storeowner, convenience store and gas station retailers believe they suffered profit losses from the ban because customers stopped shopping at their stores and chose to go to another store unaffected by the partial ban to make their purchases in one place.

Several retailers in non-compliant independent convenience stores and gas stations also discussed that perceived profit loss was extreme and limited their ability to compete for customers with other stores in the area. For example, a non-compliant convenience store illegally sold menthol cigarettes that were purchased out of state and thus not subject to the high cigarette tax in the City of Chicago of \$6.16 per pack. The store clerk suggested that the profit made from selling these packs was worth the risk of being found in violation of both the ban and the rules against untaxed cigarette sales. This retailer described how adapting to the behavior of the other stores in the area that were

selling menthol cigarettes was more important than following the rule and possibly losing money. Non-compliance was therefore a strategy to mitigate perceived profit losses in a competitive marketplace where the retailer believed that compliance would put the store at an economic disadvantage. For this store and others, the perceived gains from continued menthol cigarette sales and the ability to compete with other stores outweighed the risk of being found in violation.

Profit Loss Mitigation Strategies

Retailers in compliant independent convenience stores, the “Other” store, and the independent dollar discount store discussed managing the perceived profit losses in their stores due to the ban by increasing the sale of other products such as alcohol, food, and even regular cigarettes. For example, the independent dollar discount store had an ongoing promotion for regular Newport cigarettes, but the owner questioned whether this promotion made a difference in terms of attracting menthol cigarette customers and increasing profits at the store. Alternatively, some independent convenience stores discussed limiting the sale of regular cigarettes in their location because the demand for the product was low in relation to how expensive cartons of cigarettes were to keep in the store due to the high taxes paid for each carton in Chicago.

Chain convenience storeowners or managers also discussed attempts to promote new products to compensate for the perceived profit loss due to the ban. These efforts often involved increasing the height of the aisles to accommodate new products in the store, such as candy and snack foods. These stores were all franchise owned and the parent company was heavily involved in the initiatives; one chain convenience store owner met weekly with field consultants from the corporate office to discuss how to

make up profit losses that he perceived were due to the ban and other regulations, such as a recent tax increase on sugar sweetened beverages. Further, the parent company often worked with owners to move unsold flavored tobacco products to other stores in the chain prior to ban implementation, suggesting a higher level of resources were available to stores within the franchise network to deal with anticipated or perceived profit losses.

Gas Stations: Appealing the Ban

In contrast, retailers within franchise-owned gas stations reported that the parent companies were only concerned about the external appearance of the store, and store owners were left on their own to make decisions regarding what to sell, how to manage profits, and whether to comply with a policy. Only one gas station owner discussed increasing the number of products sold at his store to attract customers in response to perceived profit losses. The remaining gas stations had either appealed or were appealing their designation as within 500 feet of a high school; they were still able to sell menthol cigarettes and other flavored tobacco while the appeal was heard. In this sample, only gas stations appealed whether the ban affected their store. Gas station retailers described the appeals process as resource intensive, where appealing the ban required hiring a professional plat surveyor to measure the distance between the school and the store, submitting this documentation to the enforcement agency, and hiring a lawyer to represent the store during the appeals process. While none of these retailers discussed that the store lost customers or profits, several expressed fear and uncertainty that this would happen or the store would go out of business if they were no longer able to compete for customers with other stores in the area not affected by the ban. For these retailers, the

appeals process was an investment and strategy to eliminate the potential for profit loss altogether if the appeal was ruled in favor of the store.

Enforcement Power: Income Generation, Fines, and License Renewal

Retailers across store type reported that enforcement visits happened on a regular basis (e.g., every three months). They were also aware that the city could conduct a visit at any time. Retailers characterized enforcement visits as tense. Several retailers believed that agents used the inspections as a means of generating revenue, inspecting the store thoroughly for any violation, including whether the store sold flavored tobacco and menthol cigarettes. Often retailers described feeling as if there was “no room for error” with the enforcement agency:

But they were – they don’t - there’s no room for error with them, you know? If they find something, they got you. Even if it’s one thing, like, “Come on, really? Can you give me a break? You know? You see I’m having a hard time here surviving?” They don’t care. (#53 Independent Convenience Store)

To this retailer and others, there was a sense of conflict between the city and the store during an inspection. It was easy for the city to fine a store for “one thing” while ignoring the financial struggle that would create for the retailer or the context contributing to the violation.

In general, fines associated with underage sales and cigarette tax violations ranged from \$1,000 to \$10,000, while the fines for flavored tobacco ban violation ranged from \$500 to \$2,000.^{46,47} One clerk suggested that the enforcement agency was more concerned with capturing cigarette tax violations than flavored tobacco sales violations because there was a higher fine, and therefore higher possibility to generate revenue,

associated with selling untaxed cigarettes. He felt the inspection agents almost tore his store and others in the area apart searching specifically for untaxed cigarettes. These narratives suggest that retailers viewed enforcement visits as a way for the city to generate income, and there was a perspective present that agents may prioritize enforcement of rules that were perceived to be more lucrative for the city.

In contrast to the experiences of the non-compliant stores discussed above, the majority of retailers expressed that the potential fine for selling menthol cigarettes and other flavored tobacco outweighed the potential profit made from violating the ban. One liquor store manager calculated the cost:

Like if I'm gonna sell seven, eight cartons [of menthol cigarettes]. I'm gonna do like \$300.00 [of profit], and then one ticket I'm gonna pay \$1,000.00. So whatever I gain, I'm gonna pay more. (#125 Liquor Store)

For many retailers across store type, the threat of a fine – combined with the perceived imbalance of power between the store and the enforcement agency – created a desire to follow all rules, including the ban, and keep a clean record for their business over time. To many storeowners and managers, following the law was the path of least resistance to prevent any future trouble:

So, I have to follow what City of Chicago [says]...Like I know that the City they want to do the fine. They gonna send the police. Oh, and give you the ticket...So it's better for me to follow them, what they are trying to say. (#43 Independent Convenience Store)

Further, some gas station and convenience store owners suggested that the city had power over their ability to renew a license. According to these retailers, any violation that a

store had attached to their current tobacco license could jeopardize the owner's ability to renew that license or any other license related to product sales at the store. Often, retailers linked the discussion of licenses to the viability of the store profits in an uncertain future. This sentiment was particularly pronounced in one chain convenience store where the owner felt pressure from both the franchise parent company and the government to comply with the ban and maintain his license or he would face uncertain profit loss for himself and the franchise company.

Communication and Control: Sources of Ambiguity and Alliance

Retailers across store type reported that the official letter sent from the enforcement agency was their main source of information about the ban and when it would take effect; however, several retailers in convenience stores and gas stations felt this form of communication was one-sided or incomplete. To these retailers, an official letter from the city was conceptualized as bad news that would change how they ran their business. Further, several retailers felt that the city did not explicitly communicate the reason why they decided to ban menthol cigarettes and other flavored tobacco products. In the opinion of one gas station manager, this confusion also extended to customers:

They [the customers] said, "Oh they are crazy - the rules from the city." They [the customers] said, "What we do [smoking tobacco] for a long, long time. We are smoking these flavors...What's the use for the stop of the menthol, you know?"

(#40 Gas Station)

This retailer and others viewed the ban as something that was imposed upon them as a "rule from the city" that seemed "crazy" and lacked any explicit discourse around why such a decision that directly affected what was available in stores was made.

Identifying What Is Menthol or Flavored

Retailers often expressed confusion about what was considered a flavored tobacco product or menthol cigarette, and this was almost exclusively discussed among retailers who owned or worked in non-corporate owned or franchise-owned stores. The letter sent by the enforcement agency provided information on whom to contact with questions about a possible flavored tobacco product and a link to the city's flavored tobacco database, which was a list of flavored tobacco products managed by the CDPH.⁴⁶ Overall, retailers across non-corporate stores expressed a low level of awareness of these resources. There were two notable exceptions where retailers working in independent convenience stores discussed directly receiving a printed list of the flavored tobacco database or guidance on checking product ingredients directly from an enforcement agent. These retailers described how they continued to use the list and guidance to stock their tobacco products, suggesting that the personalized support received from the enforcement agency was helpful as they continued to implement the ban.

However, most retailers in non-corporate stores shared narratives that conveyed how they frequently used their own judgment to determine what was a flavored product. This was often informed by the descriptors listed on the product pack itself and conversations with other storeowners. For example, the owner of an independent convenience store was non-compliant with the ban because he sold a cigarette product that had a crushable menthol capsule that, when pressed, released menthol flavor into the filter. This storeowner claimed that he was initially concerned about whether to sell this product because he suspected it might be a menthol cigarette. He explained that the source of his concern was because the pack did not explicitly say menthol but rather had

descriptors like “Regular” and “Fresh.” Ultimately, he decided to continue selling this product based on information received from a fellow storeowner:

One of my friends, he has a store, and he catch him [a city official]. He go to the city to ask him about what is happening [with this pack], and they said, “If you are worried, menthol that means menthol” but if you have a look outside here, it says regular. (#18 Independent Convenience Store)

This scenario reflects multiple levels of confusion around what would be considered a menthol cigarette pack. While the data suggest that both the retailer and government official attempted to follow the ban, the ambiguity of the descriptors on the product pack led to non-compliance.

Among the retailers who claimed to be aware of the flavored tobacco database, many felt that the database was limited in capturing all the flavored tobacco products or potential flavored tobacco products on the market. As an example, the owner of an independent grocery store believed that the tobacco industry intentionally labeled flavored tobacco products “Red” or “Green.” However, since these products were not listed in the flavored tobacco database, the owner continued to stock them at his store even though he suspected they were not allowed under the ban. In a second example, the owner of an independent convenience store expressed frustration with the limitations of the flavored tobacco database and what he observed to be a lack of knowledge by city officials to determine what was flavored.

Now, technically they have a list and you go online, but it’s – it’s all generic. It won’t be specific. Like for example...what does *rare* cigarette tobacco mean? Is it a flavor or is it not considered as flavored? Technically, they don’t know – even

the city employees don't know specifically what the products – what it is.” (#148 Independent Convenience Store)

The experiences shared by this owner and others suggest that the overwhelming majority of retailers in non-corporate stores navigated implementation decisions on what tobacco products to stock with what they perceived as limited or ambiguous guidelines from government agencies around what was considered a flavored tobacco product.

In contrast, retailers who owned or worked in corporate or franchise chain stores did not express the same confusion or frustration over determining what was a flavored tobacco product that the retailers in independent stores described. Rather, they discussed that the corporate office informed the stores of any regulation that affected tobacco sales, assisted in ordering tobacco products, and audited the store, in person or through product management software, to assess compliance with the ban. Even when a corporate-owned gas station was out of compliance with the ban and sold menthol cigarettes and other flavored tobacco, the manager held the corporate office accountable: he said that he recently posted a new advertisement for flavored cigars provided by the corporate office and believed that the corporate office would always inform his store and others about any new city rule that would affect tobacco sales. Collectively, the experiences shared by retailers working in corporate-owned or franchised chain stores underscores that corporate offices hold a high level of power over the implementation process and the outcome of compliance with the ban in these stores.

Role of the Tobacco Industry

While the role of both government officials and corporate offices was often ambiguous or contradictory, retailers across store types discussed that the tobacco

representatives were both helpful partners in implementing the ban and victims of the ban themselves. The majority of storeowners and managers felt that the tobacco industry, like their own store, was experiencing the ban as a restriction on sales and reacting accordingly. For example, retailers with tobacco company contracts described that tobacco companies released stores from existing contracts for menthol cigarette sales, changed or removed advertisements, and offered new contracts for regular cigarette product sales. In fact, the owner of an independent convenience store felt that the tobacco company was much more sympathetic in offering support to the store than the city government.

I had to be buying – I had to be buying a quantity, you know, every month. And they were cool about that. I thought they were really going to start fining me, but they're like, "You know what? We understand. It's cool." I'm like, "Wow, it's about time somebody was understanding." (#53 Independent Convenience Store)

Because the company did not penalize the owner for breaking his contract, this retailer viewed them as an "understanding" partner. To this retailer and others, the tobacco industry appeared to be on their side, experiencing the same level of government control over tobacco sales.

Retailers frequently told stories of the tobacco industry's (unsuccessful) efforts to challenge the ordinance as an indication that the industry was allied with the retailers against the government. At the same time, the perspective offered by one gas station owner emphasized the idea that retailers were often left without support in the context of a partial ban. He argued that because the ban was not universal, it was not worth the tobacco industry's time to engage in a fight against the ban in order to help individual

stores. According to this retailer, the tobacco industry had given up on helping individual stores and was “following the rules” because the rules did not affect the industry’s ability to sell tobacco products in other stores across the city. Ultimately, retailers across store type frequently communicated that they believed there was nothing that the tobacco industry could do about the ban besides follow it.

DISCUSSION

In this study, retailers in convenience stores and gas stations discussed a high level of dependence on profits from tobacco customers, whom they described as frequently purchasing cigarettes along with other “basket” items. This finding is similar to the results of previous qualitative studies conducted in the United States and New Zealand, which explored retailers’ opinions on various tobacco control regulatory efforts.^{23,26,29} Additionally, retailers in convenience stores and gas stations expressed more severe perceived or anticipated profit losses due to the ban compared to liquor and grocery store retailers. Interestingly, these findings did not vary by store neighborhood suggesting that perceived profit loss and loss of customers reported by retailers was similar across smaller convenience stores regardless of whether the store was located in an area with a greater proportion of low-income or non-White residents where menthol cigarettes are more likely to be sold.¹⁰⁻¹²

Convenience store and gas station retailers discussed different strategies to manage perceived or anticipated profit loss, which often included attempts to increase the sale of snack foods, decrease the sale of regular cigarettes, appeal the ban, or – in a few cases – violate the ban and sell menthol cigarettes. Decisions on how to manage perceived losses were based on efforts to meet customer needs and demands, as in the

case of increasing or decreasing product sales, and the resources available, such as ability to hire an appeals lawyer. In short, these results suggest that profit loss was a significant concern for retailers as they implemented a new ban on product sales. While previous economic evaluation studies found that comprehensive policies, such as smoke-free bans or raising tobacco taxes, have a neutral or positive effect on profits for venues and retail stores,^{48,49} it is important to consider that partial bans may potentially contribute to profit loss among affected stores, particularly convenience stores and gas stations that claim to have lost their “one-stop shop” appeal to stores unaffected by the ban. Future research should triangulate the findings regarding perceived profit losses and quantitatively evaluate changes in profits over time among stores affected by this partial ban.

In this study, retailers across store types frequently reported that enforcement visits were a major part of the implementation process but such visits often felt invasive or were seen as a mechanism to generate revenue for the city, rather than to protect health. The perception that tobacco control policies are a moneymaking scheme by the government has been reported in other studies investigating retailer opinions on tobacco tax increases, tobacco licensing fees, and secondhand smoke bans.^{31,32,38} Although distrust resulted in retailers feeling at conflict with the government, the enforcement agency was still seen as a consistent source of authority. Stores attempted to implement the ban and follow other rules governing products sales to avoid fines and maintain a clean record for their business. This was particularly the case if a fine or potential loss of license could jeopardize a store’s already uncertain financial future. These data are congruous with the policy implementation framework approach and other studies that found strong enforcement systems lead to greater levels of compliance with a

ban.^{24,27,28,36,38,39} However, there was a competing narrative that enforcement agents prioritize other rules associated with greater fines, and therefore perceived to be more lucrative for the city, over the ban. This narrative highlights the potential for enforcement agent discretion to decide which violations to prioritize, which could influence how stores implement the ban, such as delaying implementation due to a perceived lack of government commitment to enforcement.²⁴ Future research could explore this issue in more depth by examining organizational structures that contribute to how enforcement agents decide which ordinances to prioritize.

In contrast to other studies, retailers identified the enforcement agency, rather than tobacco companies,^{22,29} as a main source of information about the ban. However, many retailers felt that government communication was one-sided. Retailers also reported a lack of clarity around what would be considered a flavored tobacco product and a lack of knowledge of the flavored tobacco database. As the policy implementation framework approach would suggest, this lack of clarity sometimes contributed to non-compliance.^{27,28} Many retailers were unaware of the flavored tobacco product database and struggled to find adequate and clear information to help guide their decision around what was considered a flavored tobacco product, particularly when product packaging was ambiguous. In two cases, retailers in independent convenience stores did receive one-on-one guidance on how to identify flavored tobacco products during an enforcement visit. These results suggest that local jurisdictions should actively engage retailers beyond sending a letter to create more dialogue around the purpose of a ban and the resources available to support implementation.

This is particularly important in the context of a growing market of ambiguously named flavored tobacco products (e.g. “Green” or “Jazz”).⁵⁰⁻⁵² Prior research found that the tobacco industry may create confusion and circumvent regulation by marketing products that have ambiguous and non-traditional names such as “Pink” or “Green,” some of which contain as many flavor components as tobacco products with explicit flavor names (e.g. “Strawberry”).⁵² Even if Chicago’s flavored tobacco database was widely used by retailers affected by the ban, without a federal mandate that requires tobacco companies to list all ingredients or label a product as “flavored,” it is unlikely that government agencies would be able to maintain a flavored tobacco database that captures a changing and shifting product landscape.⁵² The results from this study demonstrate that both retailers and the enforcement agency struggled to identify what was considered a flavored product, particularly when products did not explicitly reference a traditional flavor name. In one store, a retailer suspected that he was selling flavored tobacco products in his store but continued to sell them because these particular products were not listed in the official flavored tobacco database. These results suggest that building active partnerships between retailers and government where retailers understand and support the intention of a partial or comprehensive ban on menthol cigarettes and other flavored tobacco sales is critical to ensuring that, in cases of uncertainty, retailers follow the spirit of the law.

Finally, these data suggest that the government’s lack of clarity and engagement with retailers introduced the opportunity for other actors to build alliances that influence the implementation process. Similar to other studies, corporate offices were generally aligned with the government and offered support in stocking tobacco products and

facilitating compliance.^{31,35} However, gas station owners and managers relayed experiences that suggest that their parent companies were uninvolved in the implementation process or, in the case of the corporate-owned gas station, the parent company promoted menthol cigarette and flavored tobacco sales. These results demonstrate an opportunity for local jurisdictions to work directly with parent companies of corporate-owned or franchise-owned gas stations to build similar alliances and structures to support compliance in these stores. Future studies could inform these efforts and explore what would motivate greater involvement of parent gas station companies in implementing tobacco control regulatory efforts in their stores.

Importantly, this research found that retailers felt that tobacco company representatives were “understanding” allies in the implementation process that either tried to eliminate the ban through political pressure or supported the implementation process by releasing stores from existing contracts to sell menthol cigarettes. Although the tobacco industry effort to assist compliance was positive in terms of reducing access to menthol cigarettes, the sympathetic view toward tobacco companies held by retailers in this study stands in contrast to the general distrust of the government and lack of clarity around the resources available to implement the ban. Given that the tobacco industry often claims to represent the voice of retailers and utilizes retail group organizations to oppose tobacco control efforts,⁵³ it is possible that being viewed as sympathetic to retailers and assisting with implementation by releasing stores from contracts is an intentional strategy to prepare retailers as advocates against future efforts to introduce a comprehensive menthol cigarette ban in Chicago or other tobacco control initiatives. However, previous research suggests that retailers do not always agree with tobacco

industry claims around the impact of various tobacco sales regulations,^{23,30} and there was one retailer in this study that felt abandoned by the tobacco industry. These data suggest that there is opportunity to break down the traditional alliances between tobacco companies and retailers, especially in a partial ban setting, and build collaborative partnerships between retailers and government agencies to advance the goals of structural interventions to reduce access to tobacco products.

Limitations

This study has several limitations. First, retailers were interviewed inside their store and some interviews were cut short due to the need to return to the store floor or attend to customers. However, during data collection, specific questions related to perceived profit loss and communication with government and tobacco industry representatives were prioritized to ensure that this information was captured as much as possible across interviews. Additionally, interviews conducted at the counter were subject to frequent interruptions from customers. Some retailers easily navigated simultaneously carrying on the interview and interacting with a customer, while others stopped the conversation mid-response. In those cases, the interviewer attempted to remind the participant of the topic and continue the conversation; however, it is possible that these interruptions may have limited the depth of the answers that were provided. Finally, this study was limited to 54 retail stores not included in the previous study. Although retailers in 31 stores were included; it is possible that responses from these retailers does not represent the full range of experiences across store types, particularly for under-represented store types, such as dollar discount stores. A larger sample size and

unrestricted sampling frame could allow for a more nuanced investigation into how the implementation process varied across store type.

CONCLUSION

Overall, the results of this study of retailers affected by Chicago's partial menthol ban, suggests that retailers operated in a complex environment to manage ban implementation. This study highlights that government agencies should consider how bans, particularly partial bans, can impact the viability of businesses and work with retailers during the policy development phase to create product bans that meet the intention of reducing access to tobacco products but do not restrict the ability of retailers to run profitable businesses. Importantly, these results suggest that there is opportunity for government agencies to consistently engage retailers as active partners in the implementation and enforcement of all tobacco control regulatory efforts. Unlike the passive system of creating a flavored tobacco database identified in this study, this active approach could offer the support retailers need and build investment among this group of stakeholders in following the spirit and not just the letter of the law, particularly in the face of a shifting flavored tobacco product landscape. These efforts could strengthen already existent alliances between corporate offices and retail stores while weakening the sympathetic partnerships between tobacco companies and retailers discussed in this study and others. Finally, these results suggest that there is also opportunity for the enforcement agency to foster goodwill and support for retailers that comply with the ban and mitigate distrust in the government. In this study, retailers largely followed the rules, but they often felt a strong imbalance of power during enforcement visits. Mechanisms to reward compliance, combined with active engagement of retailers as an important group of

policy implementation stakeholders, could also build alliances between these two groups to support current and future tobacco control efforts in the retail environment.

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CHAPTER 6, MANUSCRIPT #3

Redundant and Unfair: Exploring How Affected Retailers Frame a Partial Ban on Flavored Tobacco Sales Near High Schools

ABSTRACT

Issue framing plays an important role in shaping policy actions to address tobacco use. Framing local policy options in terms of protecting youth access to tobacco (e.g. tobacco sales bans near schools) is a politically feasible approach to policy development; however, little is known regarding how tobacco retailers – who are often disconnected from the policymaking process – conceptualize the purpose and intended effect of these youth-framed efforts as they are implemented in stores. Understanding retailer opinions can provide information to support the development of regulatory efforts that may appeal to this important group of stakeholders. The current study addresses this gap and utilizes qualitative interviews with a sample of 28 retailers affected by Chicago’s ban on flavored tobacco sales, including menthol cigarettes, in retail stores within 500 feet of high schools. Results suggest that retailers largely framed Chicago’s partial ban as a measure to protect kids but felt it was redundant with the existing city-wide minimum age of sale rule. Retailers challenged whether the use of the 500 feet buffer zone changed access to menthol cigarettes and flavored tobacco products and suggested that there were more equitable methods to prevent access to flavored tobacco, such as a creating a city-wide ban, adding a “grandfather” clause to the ordinance, or preventing the tobacco industry from manufacturing menthol cigarettes. These findings suggest that the youth-frame potentially limited support for the ban among retailers, particularly when they believed that comprehensive efforts to protect youth were sufficiently in place. Further, these findings highlight opportunity to foster retailers’ support for comprehensive regulatory actions to prevent access to tobacco products.

INTRODUCTION

Issue framing is an important foundation for public health policy development.^{1,2} Framing refers to the process of selecting some aspects of perceived reality to promote a particular problem definition and solution.³ The manner in which policymakers and stakeholders selectively frame an issue shapes who is seen as affected by the problem and what solutions are available to address it.⁴⁻⁶ As Schön and Rein state, framing relies on the “shared beliefs, values, and perspectives familiar to the members of a societal culture...on which individuals and institutions draw in order to give meaning, sense, and normative direction to their thinking and action in policy matters.”⁷ Therefore, framing influences how issues are defined, understood and acted upon by both individual and institutional actors.

Issue framing plays an important role in shaping the public debate over policy actions to address tobacco use.⁸ Since the mid-1960s, the tobacco industry has consistently argued that government regulation of the tobacco market breaches individual liberties and the right to smoke.⁸⁻¹¹ On the other hand, the public health community has emphasized the role of the government in addressing tobacco use to protect the health of the population.^{8,12} Frames in support of tobacco control policies often represented cigarettes as a “killer” or lethal product produced by the tobacco industry and offered solutions toward a smoke-free society, including smoke-free air laws, restrictions on tobacco product advertising and promotion, and comprehensive state tobacco control programs to shift the social environment in which smoking and cessation occur.^{8,13}

Over the last 20 years, however, the public health community has shifted its focus away from the “killer” frame and both tobacco control advocates and the tobacco

industry have increasingly framed limiting tobacco use as an issue of preventing youth access to tobacco products.^{8,14-16} Experts argue that youth-oriented framing favors the tobacco industry because it normalizes smoking as an adult-only behavior, while simultaneously deemphasizing the industry's responsibility for creating a lethal and addictive product.^{8,15} In this vein, youth frames arguably limit the discussion of policy solutions intended to create a smoke-free society and make tobacco use socially unacceptable for both youth and adults.^{8,15} However, youth-centered tobacco control policies are widely supported by policymakers and the public.^{17,18} Local initiatives to reduce youth access or exposure to tobacco products (such as minimum age of sale policies) may be more politically feasible policy solutions because they protect a socially desirable group without infringing upon adult rights.^{5,6,14} Yet framing policy options in terms of protecting youth can reduce the likelihood of developing and implementing more comprehensive tobacco control efforts that have the potential to create broader environmental change for both youth and adults.¹⁴⁻¹⁶

In the last decade, tobacco control initiatives have increasingly focused on redesigning the retail environment to discourage tobacco use and reduce tobacco-related diseases.¹⁹ Many of these initiatives propose limiting the sale of tobacco products in retail stores within a certain distance of schools to address the positive association between tobacco outlet density and youth smoking found by several US studies.²⁰⁻²³ Framing serves as the foundation for developing these regulatory efforts and can also influence individual opinions and attitudes in support of tobacco regulatory efforts in retail stores.⁸ Tobacco retailers are an important group of implementation actors given their role as the target group of tobacco control regulations in the retail environment.²⁴ Often, the

stakeholders involved in issue framing and policy development are likely different from the group of actors involved in the implementation process.^{5,24} It is possible that targets of ban implementation, such as tobacco retailers, may be more hostile towards a regulatory action in retail stores that is perceived to negatively impact their business.⁵ As such, there is growing interest in understanding retailers' opinions of proposed or current regulatory efforts that impact tobacco sales at their stores.²⁵⁻³⁰

While evidence suggests that the tobacco industry has utilized retailer associations as front groups to oppose local tobacco control regulatory efforts,³¹⁻³³ research conducted in New Zealand and the United States found that individual retailers did not monolithically oppose government regulations in stores.²⁵⁻³⁰ Studies suggest that retailers generally supported regulatory efforts to restrict youth access to tobacco products.^{25,26,28} In several studies, retailers also expressed feelings of conflict over selling tobacco products and supported larger public health efforts to reduce tobacco use in their communities.²⁵⁻²⁸ However, retailers emphasized the need to be a profitable business and argued against regulations that they perceived to limit their ability to maintain profits or fairly compete for customers, such as prohibiting the sale of tobacco products in certain stores.^{26,28} This was particularly pronounced among smaller convenience stores highly dependent on tobacco sales as a source of profit,²⁶⁻²⁸ suggesting that store type may play a role in retailers' opinion.

Collectively, these data suggest that retailers may be more supportive of tobacco control regulatory efforts in their stores than previously considered.²⁵⁻³⁰ Yet, there is evidence that retailers do not support efforts that they perceive as unfairly restrictive on their ability to be profitable.²⁶⁻²⁸ Further, there is opportunity to better understand how

tobacco retailers themselves frame the purpose and outcome of tobacco regulatory efforts, particularly incremental efforts that restrict tobacco sales only in certain locations. The current study addresses these issues and utilizes qualitative interviews with a sample of retailers affected by Chicago's ban on flavored tobacco and menthol cigarettes sales in retail stores within 500 feet of high schools.

Chicago's ban is one of the first flavored tobacco bans to include menthol cigarettes and was implemented July 2016.^{j,34,35} Unlike a comprehensive effort, Chicago's ban is partial and affects approximately 154 retail stores across the city, or roughly 6% of licensed tobacco retailers in Chicago.³⁶ The press statements and government reports created while the ban was being developed acknowledged the general burden of menthol cigarette use, including how menthol cigarettes are associated with greater odds of youth initiation and lower odds of cessation, particularly for African American and Latino smokers.³⁷⁻⁴⁰ However these documents primarily emphasized the need for policy approaches to protect youth from menthol cigarette and other flavored tobacco use.⁴¹⁻⁴³ In an official letter to the Chicago Board of Health, Mayor Rahm Emmanuel directed the Board to engage community members and content experts to identify "'winnable' policy solutions" that would reduce flavored tobacco product use "among the most vulnerable: our children."⁴⁴ The final policy resolution described the partial ban on flavored tobacco sales within 500 feet of high schools as the "least-burdensome effective tactic to combat the serious problem of youth tobacco use."⁴⁵

This statement reflects the youth-tobacco prevention frame and potentially suggests that the partial, zone-based ban was the most politically favorable, and therefore

^j Chicago's ordinance initially affected all retail stores within 500 of all elementary, middle and high schools; however, in December 2016 City Council vote to limit the ban to stores within 500 feet of high schools, effective February 2017.

least-burdensome policy option to stakeholders. However, understanding retailer opinions can help to determine whether a product ban is an effective tactic from the perspective of the retailer implementing the initiative and provide information to support the development of tobacco control regulatory efforts, including comprehensive or partial menthol cigarette bans, that would appeal to this important group of stakeholders.⁵ The aim of this study is to explore how retailers conceptualize the purpose and intended effect of the partial ban in relation to the youth frame embedded in the design of Chicago's ordinance. Because previous research suggests that convenience stores that are more heavily dependent on tobacco sales may be less supportive of partial bans,²⁶⁻²⁸ this study also explores how results may vary based on store type. Generally, these results can inform the tobacco control community on how issue frames used to develop and design local ordinances influence retailer response to tobacco control regulatory efforts as they are being implemented in stores.

METHODS

Data collection took place between August 14, 2017 and September 15, 2017. A single investigator (LC) on the study team conducted semi-structured interviews with retailers in stores located across the City of Chicago. Interviews were conducted with storeowners, store managers, and in some cases, store clerks. All interviews took place inside the store, either at the counter or in the store office. Each store was assigned a unique numeric identifier (e.g. store #44) as a pseudonym. The Johns Hopkins Bloomberg School of Public Health Institutional Review Board reviewed this study and determined it to be non-human subjects research.

Eligibility and Sampling Approach

The Chicago Department of Public Health provided a list of all 154 retail stores affected by the ban. In a previous study, the study team randomly selected 100 stores to assess compliance with the menthol cigarette ban via in-store audits.⁴⁶ The remaining 54 retail stores not included in the compliance assessment formed the sampling frame for the current study. The 100 stores included in the previous study were not excluded because the same data collector (L.C.) for the interviews was part of the two-person data collection team that visited all 100 stores to complete the compliance assessment. During these in-store audits, data were collected covertly and the data collectors did not announce their presence or the purpose of the study. Due to ethical considerations, the 100 stores were not revisited to protect the information on store compliance that was collected. Further, excluding these stores from the sampling frame reduced any complications that would arise from a retailer recognizing the data collector or questioning the motivation for the previous visit to the store. Finally, recruiting retailers to participate in in-depth interviews from the remaining 54 stores enhanced the ability of the data collector to have an open and transparent rapport with the participants, without requiring they disclose that the store had been included in the previous study.

Fifty-one of the 54 stores were approached to participate. Two stores were not contacted because they were exclusively bar-restaurants only open during the evening. The perspective of retailers in these particular venues was not considered as relevant to the study aim as the perspectives of other more conventional tobacco retailers. The third store was a chain convenience store located in close proximity to another store of the same chain already included in the study. As such, the perspective of this store type and location was adequately represented and no contact was made with this store.

Retailers were eligible to participate if they were at least 18 years old, English-speaking, and worked in or owned a store that sold tobacco products prior to the ban implementation date of July 2016. Stores were approached a maximum of five times to participate. Of the 51 stores contacted, three stores were permanently closed, three stores were excluded because they never sold tobacco products, one store was excluded because the clerk was non-English speaking and in 13 stores retailers refused to participate. Additionally, data collected from three grocery stores was excluded from the current study. Due to time constraints faced by the managers of these stores and the need to return to the store floor, these interviews were considerably shorter (less than 5 minutes) and the content discussed did not relate to the topics explored in this paper. Further, no other retailer outside of the store manager was available to discuss additional topics. Therefore these data were not included in the present analysis.

In total, 32 retailers in 28 stores were interviewed for this study. Participants included 12 store managers, 13 storeowners, and seven clerks. In 24 stores, only one retailer participated in the interview. In the remaining four stores, two retailers participated in the same interview – in two stores two managers participated; in one store a manager and a clerk participated; and, in another store two clerks participated, respectively. Each participant was offered a \$25 gift card to compensate them for their time. In the cases where more than one retailer participated in the interview, both retailers were offered a gift card.

Participating Store Characteristics

The main unit of analysis for this study was the 28 retail stores. In the four cases where two retailers participated, the information collected from both retailers was analyzed

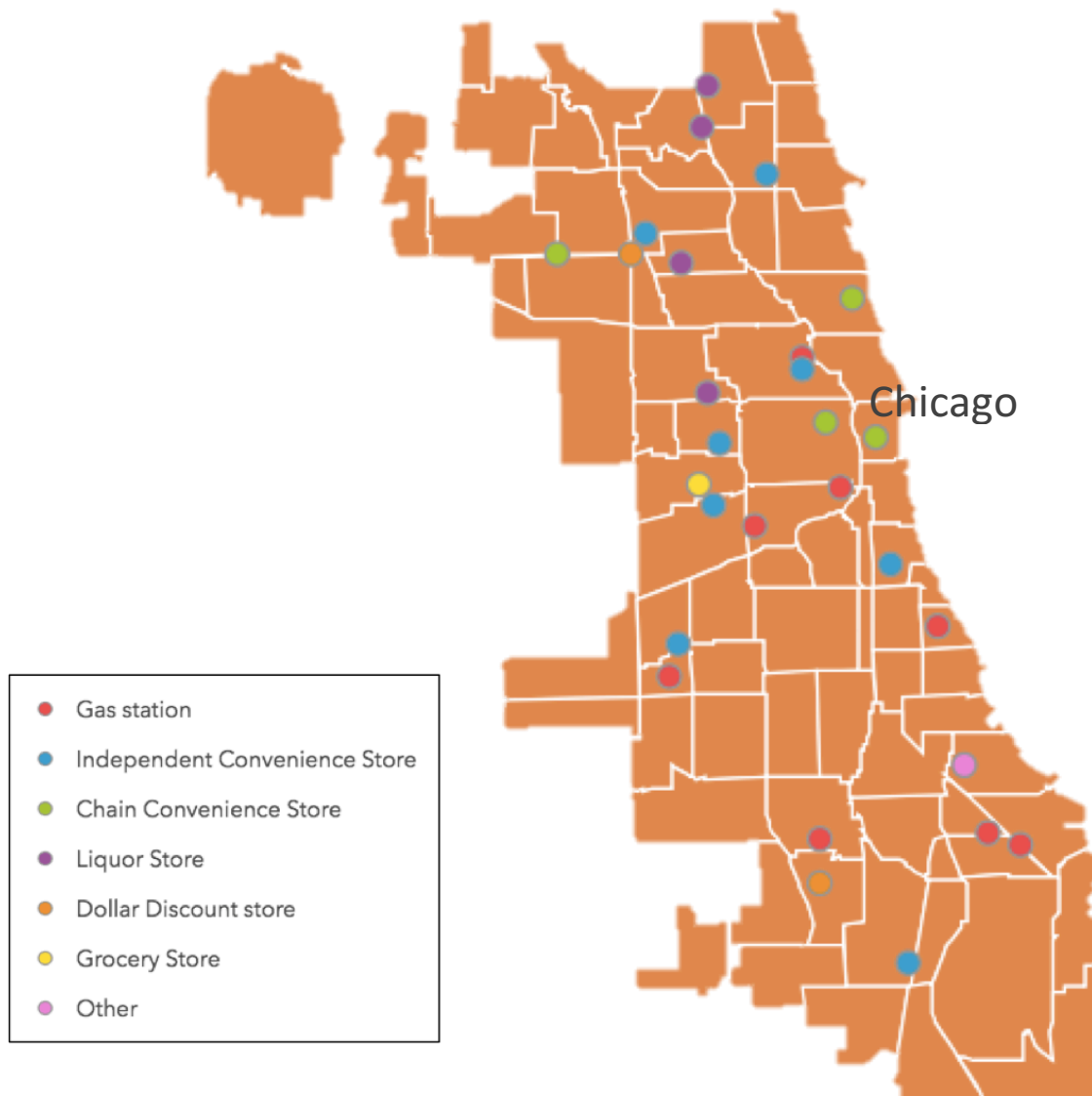
together to reflect the viewpoint of a single store. In this study, over half of the interviews either took place in gas stations (n=8, *one corporate-owned chain store, seven franchise-owned chain stores*) or independent convenience stores (n=8). The rest of the interviews were conducted with retailers in liquor stores (n=4), franchise-owned chain convenience stores (n=4), dollar discount stores (n=2, *one corporate-owned chain store, one independent store*), an independent grocery store (n=1) and one “Other” store, which was a convenience store located within a mass merchandiser complex that included two cell phone stores and a furniture and electronics store. **Figure 6.1.** displays the location of the 28 stores by store type throughout the city.

Data Collection

All interviews were semi-structured. Participants were asked about the same topics during each interview. However, additional questions were included by the interviewer to follow-up on emerging ideas or leads in the conversation. Topics within the interview guide included opinion on the ban, changes in profits and customers due to the ban, and communication with city government and other relevant stakeholders. On average, these interviews lasted approximately 18 minutes.

In this study, 10 of the 28 interviews were not audio-recorded. If a participant declined to be audio-recorded, a voice memo was recorded immediately after the interview to capture the remembered scene as quickly as possible.⁴⁷ These recordings documented the topics discussed and the information provided by the respondent, capturing the essentials of what happened.⁴⁷ For all interviews, a detailed written summary was drafted to describe the participant and setting, summarize the key topics discussed, and identify emerging themes. When possible, handwritten notes were taken

Figure 6.1. Map of the stores included in the study by store type across the City of Chicago (n=28)



during the interview to assist in drafting these summaries, as well as the voice memo recordings.

Data Analysis

A professional transcription service (Transcript Wing) transcribed all recorded interviews or voice memos verbatim. Each transcript was checked against the recording for accuracy. The same investigator (LC) conducted each interview and coded the transcripts for analysis in an effort to maintain continuity of the researcher as the research instrument.^{48,49} This process ensured that the same conceptual perspective was integrated from data collection to the analysis phase, preserving the depth of analysis from design decisions made in the field to the interpretation of data.^{49,50}

Coding and analysis followed Yin's multi-step protocol for compiling, disassembling, and then reassembling the data for interpretation.⁵¹ First, transcripts and written summaries were compiled using the qualitative data management software MaxQDA (Version 12). All documents were read for familiarity. A second, more in-depth reading followed and emerging concepts were noted to inform the development of the future codebook. In the next step, the codebook was developed by disassembling the data. Transcripts were read a third time and more detailed analytic memos were drafted to capture and define codes. During this phase, similar codes were collapsed together to create a draft codebook that contained the definition of each code, guidelines on how to apply the code to the data, and examples from the data. Codebook development was an iterative process. The codebook was applied to the transcripts and codes were revised or added until a final codebook was derived. The codebook was considered final once it sufficiently captured salient concepts related to the study aim and no new topics were

identified as the final version was applied to subsequent transcripts.⁵¹ Example codes included analytical topics such as change in access to menthol cigarettes, measuring 500 feet, and support for comprehensive policy efforts. The final coding scheme was then systematically applied to all transcripts. In the final step, coded transcripts were reviewed and the meaning of codes across transcripts compared to identify higher-level themes. In this step, patterns in the data were identified and any similarities and differences in these patterns across store type documented.

Overall, findings did not vary by store type. Results are presented via summaries and exemplary quotations, which were edited for clarity. The unique store number and store type identify the speaker for each quote.

RESULTS

Qualitative data analysis revealed three themes related to how retailers conceptualize the purpose and intended effect of Chicago's partial ban: 1) the presence of too many rules to protect kids from tobacco use; 2) the limitations of the administrative definition of 500 feet to address access to flavored tobacco products; and 3) the perception that there were other more equitable and effective strategies to reduce access to menthol cigarettes.

Too Many Rules to Protect Kids

Most retailers perceived that the ban was intended to protect youth, consistent with the way in which the flavored tobacco ban in stores within 500 feet of high schools was framed and promoted. Retailers viewed keeping kids from a life of addiction to tobacco products as a worthy goal. However, the view that policies should protect kids was often presented with the caveat that once youth turn 21 years old – the current legal

age of purchase for tobacco products in the City of Chicago⁵² – they should be allowed to freely purchase any tobacco product as adults. Retailers frequently depicted the existing age limit of 21 years old as a sufficient and fair way to protect under-age youth from tobacco use because it affected all stores in the city. As one retailer states:

I don't want to hurt the kids. And I don't want them to get addicted to it. You know. But at 21, I'm good with it. But come on, give us a break. Let us sell the [flavored] tobacco. (#53 Independent Convenience Store)

In saying “Let us sell the [flavored] tobacco,” this independent convenience store owner also conveyed a sentiment held by other retailers – the addition of the flavored tobacco ban only in stores within 500 feet of high schools penalized storeowners who believed that they were already protecting youth by following the age of sale rule. Several retailers expressed frustration at the limitations these redundant ordinances posed for business. The owner of an independent dollar discount store argued that the ban did not protect high school students who were younger than 21 but, instead, restricted his ability to sell menthol cigarettes to a customer who was 51 years old. For this retailer and others, the addition of the flavored tobacco ban unfairly limited the store from selling menthol cigarettes and other flavored tobacco products to adult customers beyond the legal age.

Because many retailers believed that both regulations attempted to protect kids, they discussed that the city needed to choose one or the other:

I do see them [kids] attracted to it [flavored tobacco], but the point is why is there the age of 21 there? You know what I mean? Like we're not supposed to sell that. And we will not sell it to them...Like it doesn't make sense. Either the ban or the

age, you know what I mean? Like both the things will not – well, it's just basically telling us to, 'You know what? You guys are done. Just get out.'" (#148 Independent Convenience Store)

This retailer expressed a commitment to protecting kids by complying with the age of sale rule. However, he also felt that the city was exercising too much control over the viability of his store by requiring too many conflicting and confusing government restrictions to protect kids from tobacco use. For this retailer and others, framing the ban to protect kids raised concerns over whether these redundant rules were meant to put stores out of business. Because of the perceived threat to business that this redundancy created, retailers recommended that only one rule – either the flavored tobacco ban or the minimum age of sale rule, but not both – was necessary to meet the framed purpose of protecting youth from flavored tobacco use.

Interestingly, within the youth frame there were several retailers who suggested that underage youth would find a way to get tobacco regardless of the ban or age of sale restriction. One gas station clerk suggested the flavored tobacco ban was useless in terms of protecting youth:

Interviewer: What do you think about banning sales on flavored tobacco in stores within 500 feet of high schools?

Retailer: I actually think they shouldn't because if they – if the kids want it, they're gonna get them anyway. Or they're gonna get somebody else to buy it for them.

Interviewer: Do you see that a lot of adults buying tobacco for kids? Okay, you do.

Retailer: What I'm saying in that is it's nothing that we're doing. They can go down the block and have somebody buy them. (#25 Gas Station)

To this retailer and others, youth access to tobacco was inevitable. Neither the individual store nor the city's rules regarding tobacco sales, regardless of whether they contradict each other, would have been able to prevent youth access to tobacco. For these retailers, the problem of youth access rested on the individual behavior of both youth and adults attempting to circumvent the rules. This perspective led some retailers to question the utility of any city rule framed to protect kids from tobacco use when it was clear that youth would not be stopped by such regulations.

Limitations of the 500 Feet Buffer Zone

In addition to questioning whether the flavored tobacco ban conflicted with the existing age of sale restriction, several other retailers indicated that the 500-foot buffer zone seemed like an arbitrary number or cut-off with little real-world meaning in terms of protecting youth. Retailers questioned the city's logic of banning tobacco sales only in stores that fall within 500 feet of high schools but excluding nearby stores that fall just outside of the zone. To them, the buffer zone was illogical in that it ignored that high school youth would be equally exposed to all of the stores near their school. The use of the buffer zone, therefore, discounted the complex nature of how stores were situated around a high school in favor of a system that counted some stores as affected while ignoring others.

Some retailers questioned what counted as 500 feet on several administrative grounds, including the way the distance was measured and what constituted the store's property. For example, the city defined 500 feet as the shortest straight-line distance

between the store's property line and the school's property line.⁵³ However, one liquor store manager argued that the actual distance it would take a high school student to walk between the store and school was greater than 500 feet. In another case, an independent convenience store owner questioned which part of the property was technically his store.

The law states 500 feet, and when you measure it from our property line to the school's property line, it's 600 feet. But they don't want to do it that way.... They did the property line measurement from the alley...But we don't even have access to the alley. All the store ends right here [back wall], but according to them, this whole thing is one property. Yes, but technically, this is *our* store. This is what we're paying rent from. This is what like the city has issued our license for, but they don't care about this. So from here to there [alley to school], it's 470 feet according to them. (#148 Independent Convenience Store)

For these retailers, the concept of 500 feet was not an objective metric or method of measurement to accurately categorize stores near high schools. Instead, it was a source of government authority that was not consistent with how these retailers perceived the location and distance of their store in relation to the high school. These retailers were ultimately trying to make sense of a binary categorization that worked in favor of some stores near high schools but not others and generally ignored how youth moved through the area.

Ultimately, most retailers concluded that they did not believe that the partial ban changed access to flavored tobacco products. Rather, they surmised that customers, both kids and adults, could go somewhere else to purchase these products. This opinion was

often juxtaposed against the limitations that the ban posed on affected stores' perceived ability to be a profitable business.

If I don't sell any menthol tobacco, customer will go one block away. And then he will buy...The customer will get whatever he wants. The only suffering is the suffering of the dealer who is near [within 500 feet of a high school]. What I'm trying to say is that you are not actually stopping the customer from buying the tobacco....A few feet away, he can buy whatever he needs, you know? Then what is the use? (#40 Gas Station)

Like this gas station manager, retailers often positioned their store as unfairly constrained by the measured distance while they positioned customers as mobile actors that did not suffer the same limitations. Customers could freely access menthol cigarettes and other flavored tobacco products beyond the administrative definition of 500 feet.

Alternative Approaches to the Partial Ban

Retailers across store type suggested what they saw as more equitable approaches than the current partial ban. Several retailers advocated for or were aware of efforts to add a grandfather clause to the ordinance, in which stores already operating as tobacco retailers would not be affected by the ban but any new store within 500 feet of a high school that applies for a license would be affected. From their perspective as established business owners, this policy would be more fair because new retailers would be aware of the restriction on flavored tobacco sales prior to deciding to apply for and pay for a tobacco license. In contrast, established retailers expressed frustration that they already paid and will continue to pay the same tobacco license fee as stores that can sell flavored tobacco (i.e., more than 500 feet from a high school). For many retailers, purchasing a

license reflected an agreement with the city that the store could sell all tobacco products. According to several storeowners, it felt as if this agreement was broken by the ban, which they described as unexpected or as happening all of a sudden. These retailers claimed that the perceived profitability of their store was in question due to the inability to sell menthol cigarettes and other products under the revised license. Therefore, the grandfather clause was viewed as a mechanism that would alleviate this perceived inequity and restore their previous agreement to sell all tobacco products.

Most frequently, however, retailers across store type expressed frustration with the partial nature of the ban by suggesting that the government either remove the partial ban entirely or ban flavored tobacco in all stores across the city. This opinion was often presented in contrast to the perceived limitations of the partial ban in reducing access to flavored tobacco products.

Make [flavored tobacco] available everywhere or take out everything [ban flavored tobacco] from all the stores...he [the customer] will (be) forced to buy the non-menthol product. If it is available somewhere, not this store, but next door, you are not going to stop him. (#40 Gas Station)

Another independent convenience store manager argued that a comprehensive ban would be better for his business and improve the health of the community by reducing access to flavored tobacco across the city. To these retailers, a comprehensive ban – in contrast to the current partial effort – would provide an equal playing field where all stores would be affected by the same rule. Importantly, these retailers believed that a comprehensive ban would be a more effective option to reduce access to flavored tobacco products, like menthol cigarettes.

Finally, a few retailers suggested that the tobacco industry, rather than small businesses, should be the target of government restrictions on flavored tobacco sales.

And if you [the city government] really are that powerful or you really want to make that kind of difference, why don't you go ahead and ban Newports or the Marlboros or – or these companies that make – the manufacturers... You know, just ban them altogether. Why the small businesses? (#148 Independent Convenience Store)

This storeowner questioned the city's decision to place the responsibility for flavored tobacco sales on local businesses. Rather, this retailer suggested that targeting tobacco companies was the most effective way for city government to make “that kind of a difference” in reducing or eliminating flavored tobacco sales. This argument was often contextualized within a larger frustration expressed by retailers that they were powerless targets for too many city rules on product sales that affected their ability to survive and thrive as a small business.

DISCUSSION

The results from this study suggest that retailers largely framed Chicago's ban as a measure to protect kids, in line with the frame used by stakeholders to design the ban during the policymaking process. Similar to previous studies, retailers in Chicago supported regulations that they viewed would protect youth, such as the city-wide rule against tobacco sales to minors under 21 years old.^{25,26,28} However, many retailers expressed frustration with and reservations about the ban on flavored tobacco sales in stores within 500 feet of high schools. The majority felt that the focus on schools was redundant with the minimum age of sale rule and affected the viability of their business.

This perspective was consistent across store type, suggesting that smaller stores heavily dependent on tobacco sales felt similarly to larger stores (e.g. liquor store) less dependent on tobacco sales.²⁶⁻²⁸ Retailers argued that only one rule – and not both – should be used to control youth access to tobacco and how tobacco was sold in their stores. Framing the partial ban around youth, therefore, potentially limited the level of support for the ban among retailers, particularly when they believed that local government efforts to protect youth were already sufficient.

In contrast, there were several retailers included in this study that opposed the ban and challenged whether regulatory efforts framed to protect youth – like the minimum age of sale rule or the flavored tobacco ban – actually prevented youth access to tobacco products. These retailers argued that as long as tobacco products were available, youth access would not be eliminated through local government regulations. This finding is consistent with other studies conducted in New Zealand where retailers suggested that youth will find a way to access tobacco and challenged any government intervention to ban tobacco sales outright or in tobacco outlets near schools.^{26,27} Ultimately, the youth frame was unsatisfactory for this group of retailers because they believed the ban on flavored tobacco was not an effective tactic against individual behavior and the desire to purchase tobacco products. This position has striking similarity to the market-oriented arguments that the tobacco industry uses to frame tobacco use as an individual choice that should not be overly regulated by the government.^{8,9,11} However, it is also possible that these retailers would be supportive of broader public health initiatives to regulate the tobacco industry and disrupt the supply of tobacco products to stores through a national ban on menthol cigarettes and flavored tobacco.¹⁵ Future research could explore the

complexities associated with retailers' perceptions that no local government policy would prevent youth access in greater detail.

Additionally, retailers questioned the logic of the ban's frame to protect youth access to flavored tobacco only in stores within 500 feet of high schools. Retailers suggested that the buffer zone failed to capture the complex environment in which stores were located in relation to a high school and how youth traveled through these environments. Further, retailers challenged whether this buffer zone-based rule would change access to flavored tobacco products and menthol cigarettes. As such, retailers felt that their stores were unfairly penalized while other stores near a school but unaffected could still sell these products. These results are similar to other studies that found retailers were opposed to partial measures that restrict tobacco sales in certain venues and view these measures as inequitable approaches to address the issue of tobacco use in local jurisdictions.^{26,28}

Further, local policy initiatives to reduce the number of tobacco outlets near schools (e.g. within 1,000 or 500 feet of schools) are a popular youth-centered tobacco control approach to redesign the retail environment and decrease exposure to tobacco products.^{20,54} The findings from this study challenge the idea that a buffer zone is a precise and objective measurement to categorize stores and reduce access to tobacco.⁶ Instead, the results from the current study suggest that affected retailers questioned the precision of the 500-foot buffer zone where some stores near high schools were included and others were not. Further, they struggled to make sense of how they fell inside or outside this zone and were skeptical of whether restricting sales only in certain zones would change access to flavored tobacco products for youth. These findings raise issues

around the utility of zone-based bans to restrict tobacco sales around schools from the perspective of affected retailers. Given that these data only reflect the viewpoint of retailers affected by a ban, it is possible that opinions on zone-based bans are likely to vary among retailers that fall outside of the affected area. Future research is needed to characterize this missing perspective and provide a more comprehensive view on how all retailers inside and outside of the buffer zone view these bans to inform the policymaking process.

Finally, many affected retailers suggested other potentially more equitable regulations to prevent access to flavored tobacco and menthol cigarettes than the current partial zone-based ban. These included a comprehensive, city-wide ban, adding a grandfather clause to the existing ordinance, or targeting the tobacco industry itself. Similar to other research, some retailers interviewed in this study also supported the general public health goal of reducing access to tobacco products in local communities.²⁵⁻
²⁸ Importantly, many retailers in this study believed that a comprehensive ban would be a more effective and equitable way to achieve this goal and discussed a comprehensive ban in terms of all customers, youth and adults. These findings challenge the frame that Chicago's partial ban is the least-burdensome effective tactic to address youth tobacco use from the perspective of retailers affected by the ban. Instead, these results highlight that this group of retailers was sympathetic to comprehensive mechanisms to regulate flavored tobacco sales that would create an even playing field for stores and protect kids. Further, some retailers proposed alternative regulatory efforts outside of the youth frame, suggesting that there is opportunity to grow support for broader initiatives to address tobacco use among youth and adults.

Limitations

This study has several limitations. As mentioned above, it is possible that retailers not affected by the ban (i.e., beyond 500 feet of a high school) would hold different views on the ban. As designed, this study lacks a comparative element to further explore differences and similarities in how retailers affected and unaffected by the ban frame the purpose and effectiveness of this regulatory action. Future research could explore this comparative element. It should be noted that a sub-analysis of the current data was conducted to compare whether retailers' opinions were different based on whether they were located within 250 feet of a high school (or roughly 1 city block) versus 251-500 feet away. The results did not vary by proximity to the nearest high school. Another limitation of the current study was that the sampling frame was restricted to the 54 stores not included in the previous compliance assessment study. In total, 28 retailers across store types were interviewed. It is possible that this approach limited the ability of the study to capture the full range of possible perspectives on the ban, particularly from underrepresented stores such as dollar discount stores and grocery stores. Finally, interviews were subject to interruption if they were conducted at the counter. While some retailers continued the interview while simultaneously engaging with a customer, other retailers stopped the conversation mid-response. The interviewer attempted to remind the participant of the topic and continue the conversation as before, but it is possible that these interruptions could have limited the depth of the answers that were provided.

CONCLUSION

The results from this study suggest that retailers affected by Chicago's partial ban on menthol cigarette and flavored tobacco sales in stores within 500 feet of high schools

do not support policymaker claims that this ban was the least-burdensome effective tactic to address youth tobacco use. Many retailers framed the ban as an effort to protect youth but felt that the age of sale rule already sufficiently protected kids. To this group of retailers, the partial ban was a redundant regulation. The creation of a buffer zone-based rule unfairly limited retailers' ability to compete with the other stores near a high school, and throughout the city, that could still sell flavored tobacco. As such, retailers suggested that the ban was ineffective at reducing access to menthol cigarettes and other flavored tobacco products. Instead, retailers argued that there were more effective and equitable approaches to reduce access to these tobacco products, including a city-wide ban. Overall, these results suggest that partial bans framed to protect youth – which may frequently be the preferred policy option for political reasons^{5,8,14,15} – may not be the preferred policy option among retailers implementing the ban in stores. Policymakers and advocates should engage and incorporate retailers' perspectives into the future development of local tobacco regulatory efforts, particularly a ban on flavored tobacco and menthol cigarette sales, to explore possibilities beyond partial bans framed to protect youth.

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CHAPTER 7: CONCLUSION AND IMPLICATIONS

Over the last two decades, the tobacco control community has increasingly focused on national and local policy initiatives to reduce access and exposure to tobacco products in retail stores.^{1,2} Menthol cigarette sales bans are one such initiative and a growing number of local jurisdictions are passing or implementing menthol cigarette bans to address the health burden associated with menthol cigarette use.^{3,4} Given the growth of this policy option and the growth of other tobacco regulatory efforts in retail stores, there is interest in research to investigate the implementation of such efforts. This includes studies to evaluate store compliance and more qualitative investigation of how retailers navigate the process of implementing such measures.⁵⁻⁹ Collectively, this research can inform current and future efforts to design and implement regulatory initiatives in retail stores across jurisdictions.

The City of Chicago was the first major jurisdiction in the United States to implement a ban on menthol cigarette sales as part of a larger flavored tobacco sales ban in retail stores within 500 feet of high schools.¹⁰ This dissertation case study examined Chicago's ban from the perspective of retailers to investigate the level of compliance with this partial ban on menthol cigarette sales and the contextual conditions surrounding ban implementation inside retail stores. To assess compliance, in-store audits were conducted to determine whether a sample of affected stores sold menthol cigarettes and data were analyzed using quantitative methods. To explore the context of ban implementation, qualitative interviews with affected retailers were conducted to examine how retailers navigated the ban implementation experience and how they conceptualized

the purpose and intended effect of the ban in terms of its embedded youth frame (i.e. ban on menthol cigarette and flavored tobacco sales in stores within 500 feet of high schools).

The results of this dissertation research can inform other urban jurisdictions as they frame and develop draft ordinance language and develop communication and enforcement plans for implementation of menthol cigarette sales bans. More generally, this research contributes to the growth of scientific literature to explore how retailers navigate the implementation of sales regulations in stores and the extent to which issue frames used to develop and design local ordinances influence retailer response to tobacco control regulatory efforts as they are carried out in stores. The remainder of this chapter summarizes the findings from the case study research, highlights the policy implications and key areas for future research, and discusses the strengths and limitations of this dissertation research.

SUMMARY OF FINDINGS

As discussed in Chapter 4, a compliance study was conducted with an analytic sample of 90 stores affected by Chicago's ordinance to determine the rate of compliance with the restriction on menthol cigarette sales. Overall, 57% of stores (n=53, weighted prevalence) were compliant with the ban on menthol cigarette sales and several compliant stores had menthol cigarette advertising. This low rate of compliance stands in contrast to the high levels of compliance found in other studies evaluating comprehensive bans, like Canada's provincial menthol cigarette ban,¹¹ and suggests that comprehensive bans would be the most ideal policy option to reduce access to menthol cigarettes. In this study, gas stations had 81% lower odds of compliance compared to larger stores (OR=0.19, 95%CI: 0.06-0.58) after controlling for school and neighborhood-level

characteristics. This result suggests that gas stations may need more focused enforcement and communication efforts in a partial ban setting. Additionally, compliance did not vary by other factors including distance to a high school and neighborhood characteristics, suggesting that partial bans are not less effective in reducing access to menthol cigarettes in low-income, non-White neighborhoods disproportionately exposed to menthol cigarette advertising and sales.^{12,13} Finally, this study also monitored the tobacco industry's response to a menthol cigarette ban and assessed whether menthol cigarette replacement packs, as previously seen in Canada,¹¹ were being sold in affected stores. No menthol cigarette replacement packs were observed in this study.

To explore the complex environment in which implementation and compliance takes place, results from interviews with retailers discussed in Chapter 5 suggest that retailers in smaller convenience stores and gas stations expressed more severe perceived profit losses and loss of their "one stop shop" appeal under the ban compared to retailers in larger stores, like liquor and grocery stores. According to these retailers, customers who purchased menthol cigarettes would no longer return to their convenience store or gas station to buy menthol cigarettes and other products. Many retailers in these smaller stores managed profits loss through increasing the number or type of other products for sale or appealing whether the ban affected their individual store. However, in some cases convenience stores and gas stations expressed very severe perceived profit loss and risked being found in violation of the ban because the profit from selling menthol cigarettes outweighed the cost of a fine. This perspective provides insight into why some stores, particularly smaller stores, may not comply with the ban on menthol cigarette sales as observed in Chapter 4.

The results discussed in Chapter 5 also indicate that enforcement visits contributed to store compliance and retailers identified the enforcement agency as their main source of communication about the ban. However, many retailers conveyed that enforcement visits often felt invasive or were seen as a mechanism to generate revenue for the city rather than to protect health. Further, many retailers felt that the enforcement agency's guidance on how to determine what was considered a menthol cigarette or flavored tobacco product was absent or unclear. This sometimes resulted in store non-compliance, offering additional context to the low rate of compliance with the menthol cigarette sales ban discussed in Chapter 4. In contrast, retailers viewed other implementation actors, like corporate offices and tobacco industry representatives as more helpful partners in the implementation process. Yet, there was some variation in these opinions. One retailer felt abandoned by the tobacco industry and the industry's lack of opposition to the ban, and several gas station retailers expressed that their parent gas station company was uninvolved in the implementation process. This finding in combination with the lower odds of compliance among gas stations discussed in Chapter 4 suggests that engaging gas station retailers and parent companies could be a priority for enforcement agencies to improved compliance with tobacco control regulatory efforts.

Finally, in Chapter 6 data collected from retailer interviews revealed that retailers framed the purpose of the ban on menthol cigarette and flavored tobacco product sales in store within 500 feet of high schools as a measure to protect kids. This was consistent with how the ban was framed and developed by policymakers.^{14,15} However, most retailers across store type believed that that the ban was redundant with the already existing rule against tobacco sales to minors under 21 years old and unfairly restricted the

viability of their businesses. Further, retailers challenged whether the 500 feet buffer zone based rule actually changed access to menthol cigarettes and other flavored tobacco products. Similar to the perceived profit loss discussed in Chapter 5, retailers felt that their stores were unfairly penalized while other stores nearby but just outside of the buffer zone could still sell these products to youth and adult customers.

Many affected retailers suggested other potentially more equitable regulations to prevent access to flavored tobacco and menthol cigarettes. These included a comprehensive city-wide ban, the addition of a grandfather clause to the existing ordinance, or targeting the tobacco industry. Some retailers saw the public health benefit of a comprehensive ban and also felt that it was a more equitable way to reduce access to menthol cigarettes and other flavored tobacco products for youth and adults without harming some businesses over others. Overall, the results of the qualitative study suggest a lack of active partnership between retailers and the enforcement agency and other policymakers who develop regulatory initiatives. This limited partnership may neglect the extent to which retailers support comprehensive initiatives and fail to provide the support and information needed to implement tobacco control regulatory efforts in retail stores.

POLICY IMPLICATIONS AND AREAS OF FUTURE RESEARCH

The following sections consider the implications of this dissertation research and areas for future research related to two key areas: policy development and policy implementation (e.g. communication and enforcement efforts related to ban implementation). These broad discussion points can inform policymakers and the enforcement agency in the City of Chicago, as well as policymakers and enforcement

agencies in other jurisdictions. Additionally, this discussion can generally inform the academic community on future directions for evaluation and research studies.

Implications for Policy Development

Comprehensive Bans Should Be the Preferred Policy Option to Reduce Access to Menthol Cigarettes

Results across the three studies suggest that a partial ban on menthol cigarettes is a less preferred policy option for local jurisdiction. The results from the compliance assessment highlight that compliance with a partial menthol cigarette ban is poor in contrast to higher rates of compliance for comprehensive menthol cigarette and flavored tobacco bans.^{11,16-18} Further, interviews with retailers suggest that a partial ban may disproportionately impact the financial viability of affected retail stores and their ability to compete for customers, while making limited gains in reducing access to menthol cigarettes which were still widely available in unaffected stores beyond 500 feet of high schools. Experiences of profit loss may be more pronounced for smaller independent convenience stores and gas stations and these stores may risk non-compliance to maintain profits, further limiting the impact of a partial ban to reduce access to menthol cigarettes.

Additionally, results from qualitative interviews suggest that retailers in affected stores argued that there were more effective and equitable approaches to reduce access to menthol cigarettes and other flavored tobacco products, including a comprehensive ban. These findings challenge the frame used by policymakers who developed the ordinance that Chicago's partial ban was the least-burdensome effective tactic to address youth tobacco use.¹⁹ Instead, these results highlight that affected retailers were sympathetic to comprehensive mechanisms to regulate flavored tobacco sales that would create an even

playing field for stores and protect kids. Although this opinion reflects only the viewpoint of affected retailers, it does provide evidence to policymakers that retailers – as key actors in the implementation process – could be allied with tobacco control advocates and policymakers in passing comprehensive efforts.

Nevertheless, it is important to consider the political nature of policymaking.²⁰ It is likely that for some jurisdictions a partial ban, particularly a ban framed to protect a vulnerable population like youth, may be a more politically feasible policy option compared to a comprehensive ban.^{20,21} Further, there is evidence that the tobacco industry has invested heavily in opposing comprehensive measures, like San Francisco's city-wide ban on menthol cigarette and flavored tobacco sales, which is the most comprehensive ban to date.²² Yet, the recent and successful public vote in favor of San Francisco's city-wide ban and the growth of other comprehensive menthol cigarette bans that restrict menthol cigarette sales to specialty, adult-only tobacco shops in cities like Minneapolis, MN demonstrate that policymakers and the public are supportive of more comprehensive efforts.^{22,23} The contribution of this dissertation research is to provide an evidence to policymakers, which suggests that partial bans are limited in their ability to reduce access to menthol cigarettes and may have unintended financial consequences for affected retailers (e.g. store within 500 feet of a high school). Future research to explore the financial impact of a partial ban on affected stores or changes in youth and adult consumption of menthol cigarettes in a partial ban setting is needed to further support this argument (see *Areas for Future Research*). However, the current data presented in this dissertation can provide emerging evidence for policymakers to advocate for comprehensive bans in their jurisdictions.

Create Opportunities for Active Engagement of Individual Retailers in Policymaking

Related to the discussion above, the results from qualitative interviews highlight opportunities to more actively incorporate the often under-represented viewpoints of retailers into the policymaking process. In this study, retailers affected by the ban were supportive of tobacco control regulatory efforts in stores framed to protect youth from tobacco use and this finding is consistent with other research.²⁴⁻²⁶ However, affected retailers expressed frustration with the redundancy of Chicago's ban in relation to the already existing and comprehensive age of sale ban, which was also framed to protect youth. This perspective, combined with the level of support retailers expressed for comprehensive efforts, suggest that retailers can bring a unique and under-reflected perspective into the policymaking process. This includes insight into how a new regulation as framed would fit with the existing tobacco control regulatory efforts already influencing business in stores and what alternative policies retailers would support. The perspective of retailers, in combination with the perspective of other more traditional stakeholders, can provide a more rounded suite of policy options that consider the unique retail environment in which the final ordinance will be implemented.²⁷

Engaging individual retailers directly is also important because retail group associations – such as the Illinois retail group association that advocated for the Chicago City Council's vote to relax the original ban from affecting stores within 500 feet of all schools to only those stores within 500 feet of high schools²⁸ – often attempt to speak for retailers.^{26,27} These groups are frequently influenced by tobacco industry opposition to tobacco control efforts.²⁹⁻³¹ However, this study and others suggest that individual retailers are interested and often supportive of the public health benefits of bans and other

tobacco control regulatory efforts in stores.^{6,9,24-26,32} Therefore, this group of individual implementation stakeholders should be directly engaged in the policymaking process to offer their unique perspective, which may not be the same as the official statement or political activity of retailer association groups.

It should be noted that in the context of Chicago's ban, the Chicago Board of Health did hold a series of town halls while the ban was being developed and some retailers were present at these meetings along with industry representatives, tobacco control experts and various community members and community groups.^{14,33} However, these events were concentrated only in a few neighborhoods in the city.¹⁴ Further, it is unlikely that a critical mass of affected retailers would attend or be aware of the town halls. The results of this study suggest that direct outreach to individual retailers at their stores throughout the policymaking process could improve the range of opinions and perspectives on proposed regulations and their impact on the operations of the stores and public health benefit.

Consider Advertising in the Design of Menthol Cigarette Bans

Finally, one interesting and unexpected finding from the compliance assessment was the observation that menthol cigarette advertisements were present in stores that were compliant with Chicago's ban on menthol cigarette sales. While price promotions were present in several non-compliant stores, signs advertising for menthol cigarettes were posted on the interior of eight compliant stores included in the sample. These results highlight that consumers may remain exposed to product promotions in areas where menthol cigarette sales are banned and no longer sold. Given that both advertising and access to products are associated with smoking susceptibility and difficulty quitting,³⁴

policymakers should consider developing ordinances that restrict both advertisement and product sales to achieve the public health goal of reducing initiation with and continued use of menthol cigarettes. Further, under an ordinance that bans the sale of menthol cigarettes it is unlikely that removing menthol cigarette advertising would violate commercial speech protections under the First Amendment, as commercial speech “is not protected if it proposes an unlawful transaction.”³⁵ As discussed above, policymakers could engage individual retailers to understand their viewpoint on removing advertisement in stores and any anticipated challenges that should be considered from their unique perspective as implementation actors.

Implications for Policy Implementation

Strengthening Relationships between the Enforcement Agency and Retailers

In addition to engaging individual retailers during the policymaking phase, the findings from interviews with retailers suggest that enforcement agencies could improve the level of retailer engagement during the implementation period of a new tobacco control regulatory effort. In this study, affected retailers often struggled to find adequate and clear information from the enforcement agency to help guide their decision around what was considered a flavored tobacco product, particularly when product packaging was ambiguous. In general, enforcement agents can use frequent enforcement visits as a venue to create more dialogue around the purpose of a ban, or other regulatory effort, and the resources available to support implementation and compliance. These efforts could strengthen alliances between government agencies and retail stores while weakening the sympathetic partnerships between tobacco companies and retailers discussed in this study. Developing active partnerships between retailers and government can also build

support for an ordinance and improve rates of compliance. In the context of a menthol cigarette and flavored tobacco ban, engaged retailers would more likely be aware of any existing guidelines and potentially more likely to follow the spirit of the law in cases of uncertainty around what is a flavored tobacco product.

Additionally, results from the interviews also identified general opportunities to foster goodwill among retailers and mitigate distrust in the government. In this study, retailers largely followed the rules, but they often felt a strong imbalance of power during enforcement visits. Local jurisdictions could consider offering retailers incentives, like financial remuneration or positive media publicity, to encourage compliance and reduce tension during enforcement visits.^{36,37} Mechanisms to reward compliance, combined with active engagement of retailers during the implementation process, can further build alliances between these two groups and advance support for current and future tobacco control regulatory efforts.

Improving Gas Station Compliance and Engaging Parent Companies

The results from the compliance assessment and retailer interviews suggest that jurisdictions may want to focus additional communication and enforcement efforts on gas stations. These stores were less likely to be compliant with the ban on menthol cigarette sales and gas station parent companies were generally uninvolved in offering implementation support to retailers or applying pressure to comply. In this sample, the majority of gas stations were franchise owned and it is likely that this situation is similar in other jurisdictions. It is possible that compliance could be improved by increasing government agency outreach and enforcement efforts at multiple levels: direct outreach to individual gas station stores and building partnerships with the gas station parent

company to incentivize greater involvement in supporting implementation of and compliance with tobacco control regulatory efforts in their stores.²⁵ Given that gas stations are common source of tobacco sales and these stores were less likely to comply with Chicago's ban on menthol cigarette sales,³⁸ focusing communication and enforcement efforts on these stores first could be a priority for jurisdictions looking to optimize resources to support the implementation of a menthol cigarette sales ban or new tobacco control regulatory effort.

Areas for Future Research

There are several areas for future research based on this dissertation research. These future research and evaluation efforts can improve understanding of how a partial ban on menthol cigarette sales and flavored tobacco in retail stores may be associated with various financial and behavioral outcomes. Further this line of research can provide evidence for policymakers considering a range of policy options to address access to menthol cigarettes.

First, results from the qualitative study suggest that profit loss was a significant concern for retailers as they implemented a new ban on product sales. Previous economic evaluations have found that comprehensive policies, such as smoke-free bans or raising tobacco taxes, have a neutral or positive effect on profits for venues and retail stores.^{39,40} This information is important for stakeholders to develop and advocate for bans, especially when facing opposition from the tobacco industry and other groups. However, it is important to also consider that partial bans may potentially contribute to profit loss among affected stores, particularly convenience stores and gas stations that claim to have lost their "one stop shop" appeal. Future research using the census of 154 affected stores

in Chicago should be conducted to evaluate changes in profits pre- and post-ban by directly using financial records of stores or a self-report survey to quantitatively capture changes in profits. An additional outcome could be the number of stores that closed and went out of business following the ban. If partial bans disproportionately affect the financial viability of affected retailers, then this evidence can be used to build support for more comprehensive efforts in jurisdictions. Further, similar research conducted in other cities that implement comprehensive efforts to ban menthol cigarette and flavored tobacco sales can provide additional evidence to contextualize how partial versus comprehensive ban may differentially affect profits in retail stores. This range of studies can provide a more balanced set of data to share with advocates, including retailers and policymakers.

Second, additional interviews with retailers not affected by Chicago's ban (i.e. retailers in store located beyond 500 feet of a high school) should be conducted to capture how retailers still able to sell menthol cigarettes and other flavored tobacco conceptualize the purpose and intended effect of the ban and the extent to which they support comprehensive efforts to reduce access to menthol cigarettes. Understanding the perspective of unaffected retailers can provide a more nuanced understanding of how retailers perceive the utility of a partial ban to reduce access to menthol cigarettes and other flavored tobacco products. Additionally, this line of research could also explore if and how retailers outside of the ban perimeter have changed their marketing practices related to tobacco sales and whether they have experienced increased sales in menthol cigarettes due to the ban. This type of evidence can contextualize the claims of affected retailers that Chicago's partial ban does not change access to menthol cigarettes.

Interviews could be conducted using a purposeful sampling approach to speak with retailers just outside of the 500 foot buffer zone (500-1,000 feet from a high school) and those further away (beyond 1,000 feet). Further, this research can capture any unintended consequences of a ban, such as an increase in tobacco company marketing for menthol cigarettes in stores nearby high schools but just outside of the 500 foot perimeter.

Finally, there is opportunity to conduct a comparative study to explore changes in products sales and tobacco use behavior comparing Chicago's partial ban setting to bans in other large urban centers, like Minneapolis's ordinance that restricts the sale of menthol cigarettes and other flavored tobacco to specialty, adult-only tobacco shops and San Francisco's city-wide ban.^{22,23} First, this study could explore changes to product sales before and after each ban by product type (menthol cigarettes, flavored other tobacco products (e.g. cigars, chew, snus), and regular tobacco) using Nielsen tobacco sales data, which is collected across the country and in major metro areas.^{41,42} This data could also capture the emergence of any new menthol cigarette replacement packs in all three settings and track the changes in flavored tobacco products using non-traditional names as discussed by retailers. This type of research can further contextualize retailers' claims that a partial ban does not change access to menthol cigarettes by exploring the extent to which sales of menthol cigarettes changed in Chicago. Further, this type of study provides the opportunity to compare changes in the sale of menthol cigarettes and other flavored tobacco products looking across the three policy options.

Additionally, a comparative study could also assess how youth and adult tobacco use behavior, including measures of ever use and current use of menthol cigarettes and other flavored tobacco products, may vary across the three different policy settings. If

feasible, this study could use national survey platforms (e.g. National Youth Tobacco Survey) and capture time-points prior to each ban and one to three years following ban implementation.¹⁶ This information could support policymakers across jurisdictions by providing information on how behavior related to menthol cigarette and flavored tobacco use varies across each policy option to inform the development of local ordinances. Further, this type of information can also inform the U.S. Food and Drug Administration (FDA), which can issue a product standard to ban menthol cigarette sales in the United States. These findings could contribute to the scientific evidence base needed to inform a national regulatory effort by investigating any changes in behavior across three policy options to restrict menthol cigarette sales.

STRENGTHS AND LIMITATIONS

Overall, this dissertation contributes to the growing line of research to explore the implementation of tobacco control regulatory efforts in retail stores. By selecting Chicago as the unique case, this study also addressed a research gap by investigating the implementation of one of the first menthol cigarette sales bans in the United States using quantitative and qualitative approaches. In fact, a major strength of the case study design is the use of multiple methods to assess distinct but overlapping aspects of ban implementation from the perspective of the retail store and retailers.⁴³⁻⁴⁵ This approach generated a rich amount of data to capture the rate of compliance, explore the complex retail store environment in which implementation takes place, and examine how retailers themselves frame the purpose and intended effect of the ban as it is implemented in the store. The breadth and depth of data collected from retailers allowed for a nuanced

understanding of the complex environment in which implementation of a new tobacco control regulatory effort takes place.

In addition, there are several notable strengths related to the methods used for each data collection and analytical approach. The quantitative assessment methodology was based on expert designed protocols used across a variety of other studies,^{46,47} enhancing the reproducibility and comparability of the study. Expert qualitative investigators also informed the design of the qualitative data collection tool and approach to data collection. Further, the student investigator employed an iterative approach to data collection during interviews with retailers. Summaries written after each interview facilitated changes to the sampling approach and interview guide. This iterative approach allowed the data collector to be responsive to emerging information related to the study aims, enhancing the richness of the data collected. Finally, the involvement of the student investigator in the design, data collection and data analysis of both the quantitative and qualitative studies established continuity of the researcher as the data collection tool and integrated the student investigator's conceptual perspective throughout the study from design decisions made in the field to analysis of the data.^{48,49}

There were also several limitations to this dissertation research. With respect to the methods used in the compliance assessment, it is possible that the results overestimated compliance if stores that sold menthol cigarettes through covert means did not sell to the data collection team.^k Additionally, the results from the compliance study may not be fully generalizable or applicable to other cities. However, they can generally inform other urban areas as they develop draft ordinances and enforcement plans. Finally,

^k A detailed discussion of how the social identity of the data collection team may have contributed to the data collected is discussed in greater detail in Chapter 3.

the sequential design of the interview study following the compliance assessment limited the sampling frame for interviews to the 54 stores not included in the compliance assessment. Although the study interviewed 31 retailers across different store types it is possible that responses from these retailers do not represent the full range of experiences across store types, particularly for under-represented stores, like dollar discount stores. A larger sample size and unrestricted sampling frame could have allowed for a more nuanced investigation of retailers' experiences with the ban. However, it should be noted that excluding the stores that were included in the compliance assessment did enhance the ability of the student investigator – who collected data for both studies – to build rapport with participants and reduced any complications related to a retailer recognizing the student investigator or requiring she disclose that the store had been included in the compliance assessment.

Finally, this case study only included the perspective of retailers within affected stores. This design decision was intentional as this is a critical perspective to understanding how retail policies are implemented in stores from the point of view of retailers as the smallest unit of change in the implementation process.⁵⁰ However, it should be acknowledged that this is not the only perspective that is relevant to the implementation process. Other perspectives including those of representatives from government agencies, particularly the enforcement agency, corporate offices, and the tobacco industry could also provide valuable information. Future research with these stakeholders could shed insight into the complex environment in which implementation takes place and identify new understandings into how these different actors interact with retailers during the implementation process.

CONCLUSION

In summary, this dissertation study adds to the growing literature on the implementation of tobacco control regulatory efforts in the retail environment. This includes compliance with new tobacco control regulatory efforts and improving understanding of the complex environment in which implementation takes place. This is one of the first studies to investigate these issues in relation to a menthol cigarette sales ban in the United States. These results can inform the design and implementation of similar ordinances to restrict menthol cigarettes sales in other jurisdictions and generally inform the development and implementation of other tobacco control regulatory efforts in retail stores. Importantly, the findings from this study can help local jurisdictions, as well as the FDA, understand the limitations of a partial approach to reducing access to menthol cigarettes from the perspective of the retail store environment.

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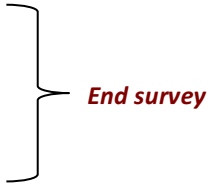
APPENDIX: SUPPORTING MATERIALS

The following sections contain the data collection tools used in this dissertation research. This includes the compliance assessment data collection form and variable glossary constructed to assist the data collection team. Finally, a copy of the qualitative interview guide is provided. There are two versions of this tool – one for stores that were compliant with the ban on menthol cigarettes sales and one for those that were not. The guides are very similar but include slightly different questions related to the implementation experience and motivations to comply.

COMPLIANCE ASSESSMENT DATA COLLECTION FORM

Compliance Assessment Data Collection Form

* Required field

Today's Date*	
Data Collector*	
<input type="radio"/> Lauren <input type="radio"/> Cruz	
STORE INFORMATION	
Name of Store*	
Store Number*	
GPS Location*	
[Map capture only! Use address in Google maps – provide latitude: longitude]	
Can you survey this store (check all that apply)? *	
<input type="checkbox"/> Yes (<i>go to "Availability of Menthol Cigarettes" section</i>) <input type="checkbox"/> No, store does not exist <input type="checkbox"/> No, store is temporarily closed <input type="checkbox"/> No, store is permanently closed <input type="checkbox"/> No, store does not sell tobacco products <input type="checkbox"/> No, asked to leave before completing the survey <input type="checkbox"/> No, environment unsafe (<i>please comment at end of survey</i>) <input type="checkbox"/> Other _____	 End survey
What type of store is this (choose one)? *	
<input type="radio"/> Convenience store (independent) <input type="radio"/> Convenience store (chain/franchise) <input type="radio"/> Grocery store <input type="radio"/> Gas station <input type="radio"/> Pharmacy or drug store <input type="radio"/> Liquor store <input type="radio"/> Mass merchandiser <input type="radio"/> Discount store <input type="radio"/> Other _____	
AVAILABILITY OF MENTHOL CIGARETTES	
Are Newport menthol cigarettes available for purchase at this store (choose one)? *	
<input type="radio"/> Yes <input type="radio"/> No	
What is the price of the pack of Newport menthol cigarettes that you purchased? *	
\$. (go to "Menthol Replacement Packs" section)	
Are another brand of menthol cigarettes available for purchase at this store (choose one)? *	
<input type="radio"/> Yes, a brand that I recognize	

<input type="radio"/> Yes, a brand that I don't recognize <input type="radio"/> No (<i>go to "Menthol Replacement Packs" section</i>)
If it is a brand you recognize, list the name and price of the brand of menthol cigarettes purchased. *
If this is not a brand/brands that you recognize, list all the names and prices for the packs purchased. *
MENTHOL CIGARETTE REPLACEMENT PACKS
Are there any visible menthol cigarette replacement packs in the store (choose one)? *
<input type="radio"/> Yes <input type="radio"/> No (<i>go to "Menthol Advertisement" section</i>)
Did you purchase the menthol replacement packs (choose one)? *
<input type="radio"/> Yes <input type="radio"/> No
If yes, list all the names and prices of the replacement packs purchased. *
If no, please comment on why the menthol replacement packs were not purchased at the store. *
INTERIOR MENTHOL CIGARETTE ADVERTISEMENTS
Are there any visible advertisements for menthol cigarettes inside the store (choose one)? *
<input type="radio"/> Yes <input type="radio"/> No (<i>go to "Exterior Menthol Cigarette Advertisements" section</i>)
What types of advertisement are present (check all that apply)? *
<input type="checkbox"/> Posters, banners, decals or stickers with menthol cigarette brand <input type="checkbox"/> Signs for price promotion of menthol cigarette brand <input type="checkbox"/> Functional items
EXTERIOR MENTHOL CIGARETTE ADVERTISEMENTS
Are there any visible advertisements for menthol cigarettes on the store exterior (choose one)? *
<input type="radio"/> Yes <input type="radio"/> No (<i>go to "Comments" section</i>)
What types of advertisement are present (check all that apply)? *
<input type="checkbox"/> Posters, banners, decals or stickers with menthol cigarette brand

- ☐ Signs for price promotion of menthol cigarette brand
- ☐ Functional items

COMMENTS

Please provide any comments about the retailer's response to your request for menthol cigarettes that may be relevant to this study.

Any other relevant comments about the store or data collected:

COMPLIANCE ASSESSMENT GLOSSARY

Variable Glossary

Section	Question	Variable Response(s)	Relevant Definition(s)/*Explanations
Store Information	Name of Store	[Text field]	Store Name: name that the store is currently doing business as, which may or may not corresponds to the name matching the store ID number on the master list.
	Store Number	[Numeric field]	Store Number: store ID number (1-180) that corresponds to the store's address and location on the route map
	GPS Location	[Latitude, Longitude]	*Use the GPS capture button on doForms
	Can you survey this store?	<input type="checkbox"/> Yes <input type="checkbox"/> No, store does not exist <input type="checkbox"/> No, store is temporarily closed <input type="checkbox"/> No, store is permanently closed <input type="checkbox"/> No, store does not sell cigarettes <input type="checkbox"/> No, environment unsafe <input type="checkbox"/> No, asked to leave before completing the survey <input type="checkbox"/> Other	Temporarily closed: the store is temporarily closed to customers but is not boarded up, vacant, or otherwise have signs that is appears out of business or no longer a retail store selling tobacco products Permanently closed: the store is vacant, boarded up, has a permanent closure sign, or is no longer a retail store business but engaged in another commercial activity

Section	Question	Variable Response(s)	Relevant Definition(s)/*Explanations
Store Information	What type of store is this?	<ul style="list-style-type: none"> • Convenience store (independent) • Convenience store (chain/franchise) • Grocery store • Gas station • Pharmacy/drug store • Liquor store • Mass merchandiser • Discount store • Other 	<p>Convenience store: sell tobacco, alcohol, and limited line of food good including milk, bread, soda, and snacks. May sell prepared food for take-away.</p> <p>___ Independent stores are locally owned with a store specific marquee and floor plan (i.e no corporate marquee sign or design for how store should look inside).</p> <p>___ Chain/franchise stores have a corporate marquee sign and floor plan. Common chains or franchises include 7-Eleven, Kwik Mart, Quick Mart, etc.</p> <p>Grocery store: small market, deli, produce market, large grocery and supermarket (e.g., Jewel Osco). Sells raw meat to be cooked at home.</p> <p>Gas station: convenience store that sell gas/have gas pumps (e.g Chevron, BP, Shell)</p> <p>Pharmacy/drug store: sells prescription drugs and over the counter medicines (e.g. Walgreens)</p> <p>Liquor store: beer, wine or liquor stores mostly sell alcoholic beverages and may sell a limited supply of snack foods</p> <p>Mass merchandisers: sell a variety of goods including clothes, electronics and food (e.g., WalMart)</p> <p>Discount stores: sell variety of products including fresh and perishable goods at discount prices (e.g. Family Dollar or local chain store)</p> <p>Other: does not fit other 8 categories; provide description</p>

Section	Question	Variable Response(s)	Relevant Definition(s)/*Explanations
Availability of Menthol Cigarettes	Are Newport menthol cigarettes available for purchase at this store?	<ul style="list-style-type: none"> • Yes • No 	Newport menthol cigarettes: most popular brand of menthol cigarettes in the United States. The most recognizable Newport menthol variant, the full flavor “Newport,” is characterized by green/teal coloring on the package and the words “Menthol Cigarette” are sometimes written at the bottom of the box. There are two other variants of Newport menthol cigarette sold in Chicago: Newport Blue and Newport Gold, See Appendix G for an image of each product.
	What is the price of the pack of Newport menthol cigarettes that you purchased?	[\$.]	Price: enter in the price information for this pack provided to you verbally by the clerk or on the receipt
	Are another brand of menthol cigarettes available at this store?	<ul style="list-style-type: none"> • Yes, a brand that I recognize • Yes, a brand that I don’t recognize • No 	<p>Other menthol cigarette brands: there are approximately 382 unique menthol cigarette products listed on the City of Chicago’s flavored tobacco database.</p> <p>Recognizable brand: common menthol cigarette brands that may offered in stores include: Salem Menthol, Kool, Marlboro, Camel Menthol and Camel Crush. See Appendix G for some example images.</p> <p>List the brand name and price information for the ONE recognizable menthol cigarettes brand purchased in the appropriate text field.</p> <p>Unrecognizable brand: any menthol product offered by the clerk is not a commonly recognized brand or does not have “Menthol” as a visible label. Purchase the pack to confirm it is a menthol cigarette pack via the flavored tobacco database.</p> <p>List the brand and price information for ALL unrecognizable menthol cigarette brands purchased in the appropriate text field.</p>

Section	Question	Variable Response(s)	Relevant Definition(s)/*Explanations
Menthol Cigarette Replacement Packs	Are there menthol cigarette replacement packs in the store?	<ul style="list-style-type: none"> • Yes • No 	Menthol replacement pack: replacement packs could maintain the color and design of previous menthol cigarette packs, including featuring green as a prominent color, being labeled as green instead of menthol, or claiming that the cigarette has been redesigned without menthol. Replacement packs could also be a new product, with or without a flavor capsule intended to appeal to menthol cigarette customers. These products may be labeled with terms that mimic sensations associated with menthol such as “Freshball.”
	Did you purchase the menthol cigarette replacement packs?	<ul style="list-style-type: none"> • Yes • No 	List the name of price for ALL menthol cigarette replacement products purchased in the appropriate text field
	Please comment on why the menthol cigarette packs were not purchased at this store.	[Text]	*Provide the reason why this purchase was not made, including whether this type of pack(s) or product was present in another store and already purchased.
Menthol Cigarette Advertisements	Are there any visible advertisements for menthol cigarettes inside the store?	<ul style="list-style-type: none"> • Yes • No 	Menthol cigarette advertisements: Advertisements are pre-printed or professionally-produced materials but may include hand-written information about price that promote a menthol cigarette brand. Store interior (inside the store): anywhere inside the physical space of the store, including the entrance area, aisles, ceiling, and area around or on the checkout counter, including the shelving units behind the counter where tobacco products are displayed,
	What types of advertisement are present?	<input type="checkbox"/> Posters, banners, decals or stickers with menthol cigarette brand <input type="checkbox"/> Signs for price promotion of menthol cigarette brand <input type="checkbox"/> Functional items	Signs, posters, banners, decals, or stickers: Pre-printed or professionally produced using the colors, images or logo of a menthol cigarette brand, can have hand-written price. Price promotion: Signs or package labels about a sale or special price for a menthol cigarette brand, including cents or dollar-off promotions, multi-pack discounts

Section	Question	Variable Response(s)	Relevant Definition(s)/*Explanations
			and buy some-get some free deals.. Functional items: Products such as counter mats, change cups, door-mats or display racks that are branded and double as advertising tools for the tobacco industry.
Menthol Cigarette Advertisements	Are there any visible advertisements for menthol cigarettes on the store exterior?	<ul style="list-style-type: none"> • Yes • No 	Store exterior: windows, doorways or wall faces of the store structure that are on view to the public located outside of the store. This includes signs or items that may be posted on the inside of the store but face outward toward the street/public. Store exterior also includes any property associated with the store including parking lot area, on the sidewalk, gas pump stations, and trash cans.
	What types of advertisement are present?	<input type="checkbox"/> Posters, banners, decals or stickers with menthol cigarette brand <input type="checkbox"/> Signs for price promotion of menthol cigarette brand <input type="checkbox"/> Functional items	Signs, posters, banners, decals, or stickers: Pre-printed or professionally produced using the colors, images or logo of a menthol cigarette brand, can have hand-written price. Price promotion: Signs or package labels about a sale or <i>special price</i> for a menthol cigarette brand, including cents or dollar-off promotions, multi-pack discounts and buy some-get some free deals.. Functional items: Products such as counter mats, change cups, door-mats or display racks that are branded and double as advertising tools for the tobacco industry.
Comments	Please provide any comments about the retailer's response to your request for menthol cigarettes that may be relevant to this study.	[Text]	*Note any reactions – verbal or non-verbal – to your request to purchase menthol cigarettes at this store. Additionally, note if the employee shares any information about how the store or customers have responded to the ban.
	Any other relevant comments about the store or data collected	[Text]	*Note if there are any special circumstances regarding this particular store observation, including safety concerns or important details that the form does not capture.

QUALITATIVE INTERVIEW GUIDE – COMPLIANT STORES

VERSION V: INTERVIEW GUIDE – COMPLIANT STORES

Opening Questions

- How long have you owned/been working in this store?
- What can you tell me about this neighborhood?
- Who generally comes into the store?

Information about Policy

- Tell me what you know about the menthol cigarettes ban.
 - **Prompt:** There is a rule that stores within 500 feet of high schools can't sell menthol cigarettes. Have you heard about this? What have you heard?

If don't know about the ban – go to page 5.

IF KNOW ABOUT BAN - continue

- How did you learn about the menthol cigarette ban?
 - **Probes** (for each agency/actor not mentioned in initial response):
 - What information did tobacco representative share about the menthol cigarette ban?
 - **Follow-Up** Did your tobacco representative(s) talk to you about profit loss or strategies to change your inventory? What type of strategies did you discuss? How effective were these strategies in helping your store comply with the ban? reduce potential profit loss?
 - What information did the health department or government share (verbal or written) about the ban on menthol cigarettes?
 - **Follow-Up** How much advance notice was provided? How adequate was this notice? Did they offer any guidelines or other advice on how to comply?
 - To what extent did the threat of enforcement and fine affect your decision to comply with the ban?
 - **(For chain/franchise stores only)** What information did the regional/corporate office share about the ban on menthol cigarettes?
 - **Follow-Up** How much advance notice was provided? How adequate was this notice? Did they offer any guidelines on how to comply and change your inventory?
 - Who is responsible for implementing or enforcing new tobacco sales regulations for this store? Are all stores expected to follow the same rules or is there independence among store owners/managers?
 - **Probes** Do corporate or regional managers ever check compliance with a policy? How? Frequency?
 - **Follow-Up** (for each source if communication occurred and as needed):
 - Were there any materials provided?
 - Can you show me?

Planning and Implementation

- Who was in charge of making the changes to the store inventory so that you would be in compliance with the menthol cigarette ban?
- How did you go about making/what was your process for making the changes to the inventory?
 - **Follow-Up**
 - Were there any challenges that you encountered?
 - Were there things that were helpful in this process?
- How did the ban and changes to store inventory get communicated to the staff? What was discussed? How does that communication usually occur? Verbal? Written (e.g. training manual)? Training?
 - **Follow-Up**
 - Do you communicate with new staff about the ban?
- What worries or concerns did you have prior to reducing your inventory? Do you still have those worries or concerns? Why or why not?

Response to Ban – Compliant Stores

[Note to probe or follow-up on the time effect in response to ban questions]

- Since the ban on menthol cigarettes went into effect (July 2016), tell me how it affected your store.
 - **Probes** (for each area of interest not addressed in initial response):
 - What changes in profits have you seen?
 - **Follow-Up (if needed)** Have you experienced the changes that you feared or anticipated?
 - Have you lost any customers?
 - **Follow-Up (if needed)** Have you experienced the changes that you feared or anticipated?
 - What changes in products offered/sold have been made?
 - **If store still sells flavored cigarillos/other flavored products:**
 - Tell me more about your decision to keep selling flavored cigarillos but not menthol cigarettes. Why did you choose to keep selling these flavored tobacco products but stop selling menthol cigarettes?
 - **Probe** What makes these types of products different (customers, how used)?
 - **If store doesn't sell cigarettes:**
 - Tell me about your decision to stop selling cigarettes. Why did you choose to stop selling cigarettes?
 - **Probe** Low customer demand? Change in store image? Not a major source of profit? Competition with other stores too high?
 - What changes have you experienced with tobacco company contracts or deals with tobacco companies?
 - **Follow-Up (if needed)** Have you experienced the changes that you feared or anticipated?
 - How has advertising for menthol cigarettes in your store changed since the ban on menthol cigarettes?

- Any other changes as a result of the menthol cigarette ban we haven't discussed?
- How have customers reacted to these changes?
 - **Probes:**
 - Did they change brand of cigarettes purchased to non-menthol? Go somewhere else? Complain?
 - **Follow-Up** (*if went somewhere else*)
 - Do staff generally tell customers where else they can purchase menthol cigarettes? Why or why not?
- Did you post any signs or communicate directly with your customers that the ban was going/went into effect and menthol cigarettes would not be sold? Why or why not?
 - **Follow-Up** (*if direct communication occurred*):
 - Who did you talk to? Were they menthol smokers?
 - What was their typical response?
- The ban has been in place for a year, have things stabilized or do you find that you are still dealing with some of these issues?
- What do you think of the ban?
- Is there anything else that we haven't talked about that you want to share?

IF DON'T KNOW ABOUT BAN

- How do you normally get information about new policies or government changes to tobacco or cigarette sales?
 - **Probes** (for each agency/actor not mentioned in initial response):
 - What type information does the health department or government share (verbal or written) about policy changes?
 - **Follow-Up** How much advance notice do they provide? How adequate is this notice? Did they offer any guidelines or other advice on how to comply with a new policy?
 - To what extent did the threat of enforcement and fine affect your decision to comply with a restriction or policy?
 - What information did tobacco representative share about policy changes?
 - **Follow-Up** Did your tobacco representative(s) talk to you about profit loss or strategies to change your inventory? What type of strategies did you discuss? How effective/helpful are these strategies in helping your store comply with policy? Did they reduce potential profit loss?
 - **(For chain/franchise stores only)** What information does your regional/corporate office share about tobacco/cigarette policy changes?
 - **Follow-Up** How much advance notice was provided? How adequate was this notice? Did they offer any guidelines on how to comply and change your inventory?
 - Who is responsible for implementing or enforcing new tobacco sales regulations for this store? Are all stores expected to follow the same rules or is there independence among store owners/managers?
 - **Probes** Do corporate or regional managers ever check compliance with a policy? How? Frequency?

Planning and Implementation

- Who was in charge of making the changes to the store inventory or store practices so that you would be in compliance with a new policy?
- How do you communicate policy changes to your staff? What gets was discussed?
 - **Follow-Up** How does that communication usually occur? Verbal? Written (e.g. training manual)? Training? Do you communicate with new staff about tobacco policies?
- What are the challenges that you encounter when trying to comply with a policy change (or change your inventory)? Any strategies or advice or processes that are helpful to you?

Response to Ban – Compliant Stores

[Note to probe or follow-up on the time effect in response to ban questions]

- Since the ban on menthol cigarettes went into effect (July 2016), tell me how it affected your store.
 - **Probes** (for each area of interest not addressed in initial response):
 - What changes in profits have you seen?
 - **Follow-Up (if needed)** Have you experienced the changes that you feared or anticipated?

- What changes have you seen in the number of customers coming into the store?
 - *Follow-Up (if needed)* Have you experienced the changes that you feared or anticipated?
- What changes in products offered/sold have been made?
 - If store still sells flavored cigarillos/other flavored products:
 - Tell me more about your decision to keep selling flavored cigarillos but not menthol cigarettes. Why did you choose keep selling these flavored tobacco products but stop selling menthol cigarettes?
 - *Probe* What makes these types of products different (customers, how used)?
 - If store doesn't sell cigarettes:
 - Tell me about your decision to stop selling cigarettes. Why did you choose to stop selling cigarettes?
 - *Probe* Low customer demand? Change in store image? Not a major source of profit? Competition with other stores too high?
- What changes have you experienced with tobacco company contracts or deals with tobacco companies?
 - *Follow-Up (if needed)* Have you experienced the changes that you feared or anticipated?
- How has advertising for menthol cigarettes in your store changed since the ban on menthol cigarettes?
- Any other changes as a result of the menthol cigarette ban we haven't discussed?
- How have customers reacted to these changes?
 - *Probes:*
 - Did they change brand of cigarettes purchased to non-menthol? Go somewhere else? Complain?
 - *Follow-Up* (if went somewhere else)
 - Do staff generally tell customers where else they can purchase menthol cigarettes? Why or why not?
- Did you post any signs or communicate directly with your customers that the ban was going/went into effect and menthol cigarettes would not be sold? Why or why not?
 - *Follow-Up* (if communication occurred):
 - Who did you talk to? Were they menthol smokers?
 - What was their typical response?
- The ban has been in place for a year, have things stabilized or do you find that you are still dealing with some of these issues?
- What do you think of the ban?
- Is there anything else that we haven't talked about that you want to share?

QUALITATIVE INTERVIEW GUIDE – NON-COMPLIANT STORES

VERSION V: INTERVIEW GUIDE – NON-COMPLIANT STORES

Opening Questions

- How long have you owned/been working in this store?
- What can you tell me about this neighborhood?
- Who generally comes into the store?

Information about Policy

- Tell me what you know about the menthol cigarettes ban.
 - **Prompt:** There is a rule that stores within 500 feet of high schools can't sell menthol cigarettes. Have you heard about this? What have you heard?

If don't know about the ban – go to page 4.

IF KNOW ABOUT BAN - continue

- How did you learn about the menthol cigarette ban?
 - **Probes** (for each agency/actor not mentioned in initial response):
 - What information did tobacco representative share about the menthol cigarette ban?
 - **Follow-Up** Did your tobacco representative(s) talk to you about profit loss or strategies to change your inventory? What type of strategies did you discuss? How effective were these strategies in helping your store comply with the ban? Reduce potential profit loss?
 - What information did the health department or government share (verbal or written) about the ban on menthol cigarettes?
 - **Follow-Up** How much advance notice was provided? How adequate was this notice? Did they offer any guidelines or other advice on how to comply?
 - To what extent did the threat of enforcement and fine affect your decision to comply with the ban?
 - **(For chain/franchise stores only)** What information did the regional/corporate office share about the ban on menthol cigarettes?
 - **Follow-Up** How much advance notice was provided? How adequate was this notice? Did they offer any guidelines on how to comply and change your inventory?
 - Who is responsible for implementing or enforcing new tobacco sales regulations for this store? Are all stores expected to follow the same rules or is there independence among store owners/managers?
 - **Probes** Do corporate or regional managers ever check compliance with a policy? How? Frequency?
 - **Follow-Up** (for each source if communication occurred and as needed):
 - Were there any materials provided?
 - Can you show me?

Response to Ban – Non-Compliant Stores

- Since the flavored tobacco ban went into effect (July 2016), have you made any changes to any tobacco products offered/sold in the store?
 - **Follow-Up** (if changes made to any products sold)
 - Why did you stop selling [product]?
 - **Probe** Low customer demand? Not a major source of profit? Competition with other stores too high?
 - How did the decision to stop selling [product] affect your store?
 - **Probe** Changes in profits? Lose customers? Changes to tobacco company contracts?
- What are the reasons for continuing to sell menthol cigarettes at this store?
 - **Probes** (for each area of interest not addressed in initial response):
 - To what extent does the potential threat of a government inspection impact your decision to keep selling menthol cigarettes?
 - **Follow-Up**
 - How frequently has your store been inspected in the past? If inspected, can you tell me what happened?
 - To what extent are you concerned about paying a fine for selling menthol cigarettes?
 - **Follow-Up**
 - Is there a certain penalty or fine that would keep you from selling menthol cigarettes and/or other flavored tobacco products?
 - To what extent does the loss of customers impact your decision to keep selling menthol cigarettes?
 - To what extent do any potential changes in your contracts/deals with tobacco companies influence your decision to keep selling menthol cigarettes?
 - Any other reasons for continuing to sell menthol cigarettes that we haven't discussed?
- How has advertising for menthol cigarettes in your store changed since the ban on menthol cigarettes?
 - **Probes**: Any new signs? Any changes in price promotions for menthol cigarettes?
- What do you think of the ban?
- Is there anything else that we haven't talked about that you want to share?

IF DON'T KNOW ABOUT BAN

- How do you normally get information about new policies or government changes to tobacco or cigarette sales?
 - **Probes** (for each agency/actor not mentioned in initial response):
 - What type information does the health department or government share (verbal or written) about policy changes?
 - **Follow-Up** How much advance notice do they provide? How adequate is this notice? Did they offer any guidelines or other advice on how to comply with a new policy?
 - To what extent did the threat of enforcement and fine affect your decision to comply with a restriction or policy?
 - What information did tobacco representative share about policy changes?
 - **Follow-Up** Did your tobacco representative(s) talk to you about profit loss or strategies to change your inventory? What type of strategies did you discuss? How effective/helpful are these strategies in helping your store comply with policy? Did they reduce potential profit loss?
 - **(For chain/franchise stores only)** What information does your regional/corporate office share about tobacco/cigarette policy changes?
 - **Follow-Up** How much advance notice was provided? How adequate was this notice? Did they offer any guidelines on how to comply and change your inventory?
 - Who is responsible for implementing or enforcing new tobacco sales regulations for this store? Are all stores expected to follow the same rules or is there independence among store owners/managers?
 - **Probes** Do corporate or regional managers ever check compliance with a policy? How? Frequency?

Planning and Implementation

- Who was in charge of making the changes to the store inventory or store practices so that you would be in compliance with a new policy?
- How do you communicate policy changes to your staff? What gets was discussed?
 - **Follow-Up** How does that communication usually occur? Verbal? Written (e.g. training manual)? Training? Do you communicate with new staff about tobacco policies?
- What are the challenges that you encounter when trying to comply with a policy change (or change your inventory)? Any strategies or advice or processes that are helpful to you?

Response to Ban – Non-Compliant Stores

- Since the flavored tobacco ban went into effect (July 2016), have you made any changes to any tobacco products offered/sold in the store?
 - **Follow-Up** (if changes made to any products sold)
 - Why did you stop selling [product]?
 - **Probe** Low customer demand? Not a major source of profit? Competition with other stores too high?
 - How did the decision to stop selling [product] affect your store?

- **Probe** Changes in profits? Lose customers? Changes to tobacco company contracts?
- What are the reasons for continuing to sell menthol cigarettes at this store?
 - **Probes** (for each area of interest not addressed in initial response):
 - To what extent does the potential threat of a government inspection impact your decision to keep selling menthol cigarettes?
 - **Follow-Up**
 - How frequently has your store been inspected in the past? If inspected, can you tell me what happened?
 - To what extent are you concerned about paying a fine for selling menthol cigarettes?
 - **Follow-Up**
 - Is there a certain penalty or fine that would keep you from selling menthol cigarettes and/or other flavored tobacco products?
 - To what extent does the loss of customers impact your decision to keep selling menthol cigarettes?
 - To what extent do any potential changes in your contracts/deals with tobacco companies influence your decision to keep selling menthol cigarettes?
 - Any other reasons for continuing to sell menthol cigarettes that we haven't discussed?
- How has advertising for menthol cigarettes in your store changed since the ban on menthol cigarettes?
 - **Probes:** Any new signs? Any changes in price promotions for menthol cigarettes?
- What do you think of the ban?
- Is there anything else that we haven't talked about that you want to share?

CURRICULUM VITAE

LAUREN CZAPLICKI

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EDUCATION

Johns Hopkins Bloomberg School of Public Health

August 2014-July 2018

Doctor of Philosophy

Department: Health, Behavior and Society

Trainee Funding

- Cancer Epidemiology Prevention and Control (T32 CA0093140): August 2014-Present
- Dissertation Enhancement Awards
- Department of Health, Behavior and Society Distinguished Doctoral Research Award: May 2017-May 2018 (\$2,000)
 - Center for Qualitative Studies in Health & Medicine Dissertation Enhancement Award: July 2017-July 2018 (\$2,000)

Tulane University School of Public Health and Tropical Medicine

August 2009-May 2011

Master of Public Health

Department: Global Community Health and Behavioral Sciences

University of Wisconsin-Madison

September 2002-May 2006

Bachelor of Science

Double Major: Biology and Sociology

RELEVANT WORK EXPERIENCE

Truth Initiative

Research Manager

June 2018-Present

Washington D.C.

- Lead team efforts related to monitoring tobacco industry product marketplace
- Lead team efforts related to retail and flavor policy research

Institute for Global Tobacco Control

Research Assistant

October 2014 – May 2018

Johns Hopkins Bloomberg School of Public Health

Baltimore, MD

- Developed coding protocol – in collaboration with multidisciplinary team – to assess industry use of flavors in e-cigarette advertisements across multiple media types for an FDA Center for Tobacco Products Centers of Excellence in Regulatory Science and Innovation (CERSI) grant project
- Developed data collection strategy for a second FDA CERSI grant project to understand e-cigarette patent innovations around nicotine delivery, including document retrieval, codebook development, and coding protocol; coded and analyzed results for manuscript publication
- Developed data collection tools and institutional review board materials for qualitative study of youth awareness and perception of “Be Marlboro” campaign advertisements in the Philippines
- Analyzed survey data to explore factors related to making a quit attempt among low-income adults experiencing multiple co-morbidities, including drug use and HIV
- Collected outdoor patio air quality data in Atlanta, GA bars and analyzed results for dissemination
- Supervised teams of 2-4 graduate students to complete coding activities for two CERSI grant projects
- Led a collaborative team of members from the Institute for Global Tobacco Control and

Lighthouse Center, a community-based research center, to analyze data from a convenience sample of low-income smokers and develop manuscripts and grant materials

SAPPHIRE Study

Field Staff

June 2015 – October 2016

Johns Hopkins Bloomberg School of Public Health

Baltimore, MD

- Conducted observational audits of neighborhood activities related to sex work and drug use as part of formative evaluation to inform sampling strategy for SAPPHIRE cohort study
- Interviewed approximately 60 sex workers for baseline and follow-up data collection using computer assisted structured interview guide
- Connected study participants to necessary resources within the community

Evaluation Manager

February 2012 – August 2014

Louisiana Public Health Institute

New Orleans, LA

- Designed audit tools and managed 12 teams of data collectors to capture data on point of sale marketing of food, tobacco, and alcohol products in 500 retail stores in New Orleans
- Developed evaluation plan and metrics for statewide Louisiana Campaign for Tobacco-Free Living
- Assessed satisfaction with tobacco control program activities and staff capacity
- Facilitated town hall style meetings with community members and tobacco-control advocates to disseminate results of research and evaluation activities and solicit additional feedback
- Managed data collection on the physical and psychosocial effects of acute secondhand smoke exposure in bars; measures included lung function and levels of environmental tobacco smoke exposure (i.e. PM_{2.5})
- Designed and implemented formative community health assessments throughout Louisiana and within 17 counties along the Gulf Coast of Alabama, Mississippi, and Florida
- Conducted process and impact evaluation for several projects in the Gulf Coast region intended to build community capacity and develop resiliency in the face of natural and man-made disasters
- Member of the organizational strategic planning steering committee
- Led grant application process to secure funding for community development projects in Louisiana
- Facilitated monthly all-staff meetings as part of organizational redesign
- Provided technical assistance to internal staff and partners on data collection, analysis, and visualization

Clinical Research Coordinator

August 2011 – January 2012

Tulane Cancer Center – Office of Clinical Research

New Orleans, LA

- Coordinated 7 research trials on site to investigate therapeutic interventions for prostate cancer
- Collected data from study participants regarding overall mental and physical health for evaluation
- Managed communication with trial personnel and updated several study databases
- Abstracted data from medical record keeping software

Abuse and Sexual Risk Behavior: A Pilot Intervention

Program Coordinator

January 2010-August 2011

Tulane School of Public Health and Tropical Medicine

New Orleans, LA

- Analyzed qualitative interviews regarding serostatus disclosure and secondary transmission behavior among HIV-positive women with an abuse history
- Recruited participants for an abuse and risk behavior pilot intervention from several HIV/AIDS clinics
- Collected and managed health behavior data from study participants for analysis
- Conducted process evaluation of the intervention to inform future grant funding

BRAC Evaluation Project**Research Assistant****January 2011-May 2011****Tulane School of Public Health and Tropical Medicine****New Orleans, LA**

- Analyzed peer reviewed literature and white papers to assess impact of main program activities of the Bangladesh Rural Advancement Committee (BRAC), a large non-governmental organization
- Compiled and cleaned data for analysis from the World Bank Development Indicators database

Nutrition Fellow**September-December 2010****International Centre for Diarrhoeal Disease Research****Dhaka, Bangladesh**

- Analyzed food production data and drafted policy report regarding the impact of agricultural practices in Bangladesh on the food security status and level of nutrient intake among population
- Surveyed 40 mothers enrolled in nutrition programs regarding their satisfaction with the program and the health status of their child with the assistance of a community health worker
- Collected census data on 60 households to construct sample frame for study enrollment in programs

ADDITIONAL WORK EXPERIENCE**Assistant Scientist****September 2006-May 2008****Masonic Cancer Center****U. of Minnesota- Twin Cities**

- Conducted research to investigate molecular signaling through the progesterone receptor in breast cancer cell lines
- Participated in bi-weekly journal clubs to discuss relevant research

Americorps Vista Associate**Summer, 2006****Preschools of Hope****Madison, WI**

- Taught early math and literacy skills to preschool children with supervisor instruction
- Created age-appropriate math and literacy games and assignments for home-based learning activities

ORGANIZATIONAL MEMBERSHIP

Professional Organizations**Society for Research on Nicotine and Tobacco:**

Trainee member since September 2015; manuscript reviewer since 2017

American Public Health Association:

Student/Professional member since August 2010; abstract reviewer since 2018

American Evaluation Associations:

Professional member March 2011 to August 2014; abstract reviewer 2013-2014

Committees/Student Organizations**Students Outreach Resource Center Social Justice Task Force:**

Member of "Programmatic" task force arm

Students for Positive Academic Partnership with the Baltimore Community:

Founding member and Vice President since April 2015

Department of Health, Behavior and Society Practice Committee:

Student member academic year 2015/2016

PUBLICATIONS

Czaplicki L, Cohen JE, Jones MR, Clegg Smith K, Rutkow L, Owczarzak J. Compliance with the City of Chicago's partial ban on menthol cigarette sales. *Tob Control*. 2018. doi: tobaccocontrol-2018-054319 [pii].

Latkin, C, Kennedy, RD, Davey-Rothwell, M, Tseng, T, **Czaplicki, L**, Baddela, A, et al. (2017) The Relationship Between Neighborhood Disorder and Barriers to Cessation in a Sample of Impoverished Inner-city Smokers in Baltimore, Maryland, USA. *Nicotine Tobacco Research*, doi: 10.1093/ntr/ntx252

Latkin, C, Tseng, T, Davey-Rothwell, M, Kennedy, RD, Moran, MB, **Czaplicki, L**, & et al. (2017). The Relationship between Neighborhood Disorder, Social Networks, and Indoor Cigarette Smoking among Impoverished Inner-City Residents. *Journal of Urban Health*, 94(4), 534-541.

Singh, H, Kennedy, RD, Lagasse, L, **Czaplicki, L**, Cohen, J. (2017). E -cigarettes and weight loss – product design innovation insights from industry patents. *Nicotine Tobacco Research*, doi: 10.1093/ntr/ntx112 [doi].

Clum, G, **Czaplicki, L**, Andrinopoulos, K, Muessig, K, Hamvas, L, & Ellen, J. (2013). Strategies and Outcomes of HIV Status Disclosure in HIV-Positive Young Women with Abuse Histories. *AIDS Patient Care And Stds*, 27(3), 191-200.

Daniel, AR, Gaviglio, AL, **Czaplicki, LM**, Hillard, CJ, Housa, D & Lange, CA (2010). The Progesterone Receptor Hinge Region Regulates the Kinetics of Transcriptional Responses Through Acetylation, Phosphorylation, and Nuclear Retention. *Molecular Endocrinology*, 24(11), 2126-38.

PUBLICATIONS IN PROCESS

Moran, MB, **Czaplicki, L**, Lagasee, L, Cino, S, Trigger, S, Zanberg, I, Sawdey, M, Engstrom, M, Kennedy, RD. How is JUUL advertising? (*In preparation for submission – Tobacco Control*)

Crossnohere, N, Davey-Rothwell, M, Latkin, C, Tseng, T, **Czaplicki, L**, Knowlton, A. (2018). The interacting effects of peer smoking norms and smoking dependence on quit attempts: ender-stratified results from a study of low-income smokers in Baltimore, MD(*Under review – Health Education & Behavior*)

Czaplicki, L, Lagasse, L, Sign, H, Cohen, J, Kennedy, RD. (2018). Use of patents to understand e-cigarette design and inform product regulation. (*In development*)

CONFERENCE POSTERS AND PRESENTATIONS

Society for Nicotine and Tobacco Research Annual Meeting

Baltimore, MD March 2018 (24th Annual Meeting)

Presentation: **Czaplicki L**, Owczarzak, J, Jones, M, Smith, K, Cohen, J. “Compliance with the City of Chicago’s Partial Menthol Cigarette Sales Ban in Tobacco Retail Stores within 500 Feet of High Schools”

Poster: Tseng, T, **Czaplicki, L**, Kennedy, RD, Latkin, C, Moran, MB, Davey-Rothwell, M, Knowlton, A. “The Reported Chemosensory Appeal of Menthol Cigarettes among Low-Income African –American Smokers in Baltimore”

Chicago, IL March 2016 (22nd Annual Meeting)

Poster: **Czaplicki L**, Kennedy RD, Singh, H, Lagasse, L, Cohen, J. “What Industry Patents Tell Us about Electronic Cigarette Product Design”

Poster: **Czaplicki L**, Kennedy RD, Davey-Rothwell M, Tseng TY, Latkin C, Knowlton A. “Measuring Nicotine Dependence among a Population of Low-Income Menthol Cigarette Smokers in Baltimore City”

Poster: Tseng TY, **Czaplicki L**, Davey-Rothwell M, Latkin C, Kennedy RD Knowlton A. (2016). “Home Smoking Rules among Low-Income, African American Smokers in Baltimore City”

Philadelphia, PA February 2015 (21st Annual Meeting)

Poster: Soong, A, Kennedy, RD, **Czaplicki, L**, Cohen, J. “Tobacco Smoke Pollution on Outdoor Patios Documenting Sources of PM_{2.5} Using Wearable Imaging Technology”

National Institutes of Health Tobacco Regulatory Science Conference

Bethesda, MD Spring 2016

Presentation: Moran MB, **Czaplicki L**, Lagasse, L, Cino, S, Trigger, S, Zandberg, I, Sawdey, M, Kennedy, RD. (2018) “The Role of Flavor in Electronic Nicotine Delivery System (ENDS) Advertising: A Comparison of Juul and Vuse”

Poster: Kennedy, RD, **Czaplicki, L**, Lagasse, L, Clawson, C, Trigger, S, Zandberg, I, Sawdey, M, and Moran, M. (2018) “The Use of Flavors in Business-to-Business ENDS Advertising”

Bethesda, MD Spring 2016

Poster: Tseng TY, **Czaplicki L**, Kennedy RD, Davey-Rothwell M, Latkin C, Knowlton A. (2016). “The Chemosensory appeal of menthol cigarettes among low-income population of African Americans”

American Public Health Association Annual Meeting

New Orleans, LA November 2014 (142nd Annual Meeting)

Presentation: Priebe, A, Carton, T, Farb, H, **Czaplicki, L**, Tulikangas, M, Gerig, JK et al. “Assessing the Food, Tobacco, and Alcohol Point of Sale Environment in New Orleans: Findings from a Mixed Methods Study”

Presentation: Canterberry, M, Harrington, D, Ghaffar, A, **Czaplicki, L**, Rudov, L, Gerig, JK et al. “A physiological assessment of secondhand smoke exposure in the absence of a comprehensive smoking ban”

Presentation: Tulikangas, M, **Czaplicki, L**, Rudov, L, Kennedy, S, Luckett, J, Farb, H. “Understanding the C.O.S.T. of unhealthy retail environments: Disseminating POS research results through a dynamic youth advocacy program in New Orleans”

Presentation: Harrington, D, Carton, T, Ghaffar, A, Rudov, L, Tulikangas, M, **Czaplicki, L**, et al. “An Assessment of Secondhand Tobacco Smoke Exposure Using Personal Air Sampling and Exhaled Breath Analysis”

Poster: Francois, S, **Czaplicki, L**, Priebe, A, Farb, H. “Environmental Vulnerability and Community Resilience along the Gulf of Mexico Coast: A Mixed-Methods Approach to Assessing Community Health Needs and Assets in Four Louisiana Gulf Parishes”

American Evaluation Association Annual Meeting

Washington D.C. October 2013 (28th Annual Meeting)

Demonstration: Priebe, A, **Czaplicki, L**, Francois, S, Farb, H. “How to Get a Million Voices to Agree? Finding the Common Ground: Conducting a Multi-State, Multi-Stakeholder Community Health Assessment”

Community Indicators Consortium

Chicago, IL October 2013

Presentation: **Czaplicki, L**, Morrison, M, Francois, S. “Interagency and inter-state partnership: A common agenda to assess the health status of residents in coastal Alabama utilizing the Community Assessment for Public Health Emergency Response (CASPER)”

Presentation: Francois, S, **Czaplicki, L**, Brown, L. “Health Disparities among Gulf State Residents: Examining Socioeconomic and Environmental Risk Indicators at the Sub-County Level”